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ABSTRACT

This report concerns the capital building programs and their costs. Comments and recommendations are made concerning enrollment projections and their bearing on the need for additional school accommodation, utilization of existing accommodation, procedures for approval of capital building projects, and financing capital building programs. Findings, conclusions, and recommendations are summarized in the first chapter of the report. The supporting information and data are provided in the more detailed statements in succeeding chapters. (Author/MLF)

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Committee on the Costs of Education

ED 095642



EA 006 374



Interim Report Number Two

School Building Programs

October, 1972

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To His Honour

The Lieutenant-Governor of the Province of Ontario

May it please Your Honour:

We, the members of the Committee on the Costs of Education, appointed by Orders-in-Council, dated the 23rd June, 1971, and the 30th June, 1971, to examine the costs of education for the elementary and secondary schools of Ontario in relation to the aims and objectives, programs, priorities, and the like, of the educational system and to evaluate the programs in the requirements of the present day, and in terms of the expenditures of money for them, submit to Your Honour, herewith, a second interim report.

A handwritten signature in cursive script, likely belonging to J. C. McManis.

Chairman

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October, 1972



OC-1211/71

Copy of an Order-in-Council approved by His Honour the Lieutenant Governor, dated the 21st day of April, A.P. 1971.

The Committee of Council have had under consideration the report of the Honourable the Prime Minister, dated April 20th 1971, wherein he states that,

WHEREAS it is deemed desirable to examine the costs of education for the elementary and secondary schools of Ontario in relation to the aims and objectives, programs, priorities, and the like, of the educational system,

AND WHEREAS there is a need for evaluation of the programs in the light of the experience with them, the requirements of the present day, and in terms of the expenditures of money for them,

The Honourable the Prime Minister therefore recommends that there be established a Committee on the Costs of Education in the Elementary and Secondary Schools of Ontario for the purposes hereinafter mentioned:

- to study the use of the financial resources being provided for elementary and secondary education in Ontario in the attainment of the educational goals;
- to examine the present grant plan to determine if the various differentiating factors such as course, location, level (elementary and secondary), and type (ordinary and extraordinary) generate funds in proper balance consistent with the needs for the attainment of desirable educational objectives;
- to examine the implications of ceilings on expenditures by local school boards, including the effect on the decision-making and autonomy of local school boards;
- to examine the various aspects of school programs with particular reference to innovations and new concepts as, for example, the "open plan" organization, technical and commercial programs, and use of educational technology, with a view to designing and recommending research studies to determine the effectiveness of these concepts in relation to the aims and objectives of education, these studies to be conducted by contract arrangement with research agencies;
- to communicate and consult with groups and organizations representative

of parents, teachers, trustees, students, and other interested parties;

- after due study and consideration, to make representations and to submit a report or reports to the Government with respect to the matters inquired into under the terms set out herein as the Committee sees fit.

That the Committee be empowered to request submissions, receive briefs and hear persons with special knowledge in the matters heretofore mentioned.

That the Committee be empowered to require the assistance of officials of the Department of Education for such purposes as may be deemed necessary.

That members of the Committee be empowered to visit schools and classrooms in Ontario, by arrangement with local school systems.

The Committee of Council concur in the recommendation of the Honourable the Prime Minister and advise that the same be acted on.

Certified,

Clerk, Executive Council

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PREFACE

The terms of reference of the Committee on the Costs of Education authorize the Committee "to study the use of the financial resources being provided for elementary and secondary education in Ontario in the attainment of the educational goals." For the last twenty-five years, there has been a sustained demand for additional school accommodation. The financial resources allocated for the construction of new buildings and additions have reached unprecedented amounts and have continued at a high level to the present time.

A number of factors combined to create a need for expansion of accommodation and facilities. The tremendous increase in enrolment following World War II was the major factor in the demand for additional pupil places. The consolidation of small rural schools at the elementary level and the organization of larger composite schools at the secondary level both contributed to the need for space in new locations. The amount and types of accommodation provided were increased by changes in the curriculum designed to broaden the scope of the educational offerings available to students, to provide greater opportunities for the individual student, to relate the programs to current demands and requirements of society, and to permit experimentation and innovation. The fact that little or no school building took place during the Great Depression and World War II meant that there was a backlog of need that had to be met.

During the five years since 1967, however, a new set of circumstances has been emerging which will directly affect the need for additional accommodation in the seventies. The enrolment at the elementary school level reached its peak in 1970 and is now declining rapidly. At the secondary level, the rate of increase has declined and an actual decrease is anticipated, beginning in 1978. While it is true that some consolidation of small elementary schools may still be possible and desirable, additional space requirements for this purpose have, for the most part, been met. As for secondary schools, nearly all parts of the Province are served by units large enough to offer a wide spectrum of programs. There are only a few centres where additional space may be required to extend the advantages of the larger school.

The fact that the number of new pupil places constructed since 1946 is almost equivalent to the present total enrolment means that the great majority of students are now accommodated in modern structures. It follows that, in view of increasing costs of operation, the foregoing factors weigh heavily against any decision to allocate scarce financial resources to the construction of additional pupil places.

The Committee on the Costs of Education felt that, in the light of these considerations, it should give priority to an examination of the capital building programs and their costs. It wished to determine whether the earlier emphasis on the provision of additional pupil places was being appropriately modified to take into account the new circumstances and their likely development in the balance of this decade. Inherent in this analysis is some assessment of the related responsibilities and procedures of school boards, the Ministry of Education, other agencies, governmental and non-governmental, and of the interrelatedness of their functions in the provision of school accommodation.

In its studies, the Committee has had the benefit of briefs and presentations made to it many of them at public hearings. Officials of the School Finance Branch and the Architectural Services Section of the Ministry of Education have been helpful to us in several ways. They have appeared before the Committee to describe their programs and to answer questions about them. Their co-operation in the provision of information and data has been complete and unfailing. We could not have had greater help or a more courteous reception. In addition, meetings of the chief executive officers of school boards with, in most cases, their financial officers, have been held by our staff in the ten regions of the Province. The views and comments of these representatives have been most helpful in the analysis and assessment of the problems involved. We wish to thank them for their co-operation, helpfulness, frankness and objectivity in an area where their experience and knowledge of local conditions and circumstances have contributed greatly to our understanding of the school accommodation needs throughout the Province. The Committee must, of course, assume full responsibility for the recommendations that follow.

It is anticipated that the Committee will have further comments about school building programs as a result of other studies which it is conducting at the

present time. The findings of these investigations may have implications, for example, for the school plant, for the type of facility provided, and for the uses to which accommodation may be put. The results will be presented in future reports in the context where they are most applicable. They will be extensions of the present submission and will be consistent with the findings and recommendations contained in this Report.

CHAPTER 1

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The actual decrease in enrolments at the elementary school level and the expected decrease in 1978 at the secondary school level have important implications for policy in the provision of school accommodation during the next decade. There are, of course, other considerations which will affect policy, including the number of new and additional pupil places provided, the degree of utilization of existing accommodation, the financial resources already committed for buildings, the indebtedness outstanding as a result of past commitments, and the procedures for the approval and financing of essential school accommodation to be provided in the future. The Committee has, in fact, examined these in some detail. Our findings, conclusions, and recommendations are summarized in this chapter of our Report. The supporting information and data are provided in the more detailed statements in succeeding chapters.

A. Enrolments

Our studies indicate that the total elementary school enrolment, which began to decline in 1971, will continue to do so until 1980. By the latter year there will be 180,519 fewer pupils than there were in 1970 when the peak enrolment was reached. At the secondary school level, the projection of enrolments is more difficult. Nevertheless, there has been a deceleration of the rate of increase since 1969 and it is anticipated that this trend will continue until 1977. Thereafter there will be an actual decrease each year during the remainder of the decade. By 1981, it is expected that there will be between 40,000 and 50,000 fewer students than in the peak year.

It is clear from this sudden reversal of trends that precise advance planning is an essential component of policy-making planning based on a thorough analysis of demographic trends and the other factors which have an influence on school enrolments. The inconsistency and uncertainty of future accommodation policies among boards in Ontario at the present time have convinced the Committee that such precision in planning has not been achieved - certainly not on a Province-wide basis - and we therefore propose first that steps be

taken to achieve it without delay. We identify an important responsibility for the Ministry of Education and the local school board in this process.

We recommend,

(1) that the Ministry of Education develop within its Planning and Research Branch the expertise needed to bring together and systematically analyse information, data, reports, trends, and decisions available from all authoritative sources, especially at the National and Provincial government levels, likely to have a bearing on the need for additional school accommodation. We see the need of a small, highly efficient research unit to do this job as a service to the entire Ministry, and a simultaneous reduction or elimination of any overlapping research function within the Ministry. The results of this analysis should be made available by the Ministry of Education at least annually to school boards and all other interested bodies;

(2) that each school board make a detailed study and analysis of the circumstances and anticipated developments within its jurisdiction which may affect school enrolments; and that these studies become the basis for the board's projections which can be incorporated into its long-term planning, including plans for the provision of accommodation.

B. Amount of School Accommodation

We find that, since 1945, school boards have provided 1,463,251 pupil places at the elementary level and 550,480 pupil places at the secondary level, for a total of 2,013,731 places. The corresponding enrolment figures in 1971 were 1,456,840, 574,520 and 2,031,360 respectively. Thus, even if an allowance is made for factors which might reduce the possibility of utilizing all the places provided, more than 90 per cent of the students are accommodated in classrooms built during the past twenty-five years.

It follows, therefore, that the number of new pupil places needed to house all students in accommodation not more than twenty-five years old is approximately ten per cent of existing enrolment. There are some factors which might tend to increase the percentage slightly beyond this level. An example is the transfer of students from their present schools to new housing developments. The total enrolment, however, is declining so that the possibility of

abandoning old or obsolete accommodation also exists.

The small proportion of school accommodation over twenty-five years old and the declining enrolments make it imperative that extreme caution be exercised by school boards before any decision is made to provide additional pupil places.

We recommend,

(3) that, to assist each school board in the determination of its space needs, the Ministry of Education in consultation with school boards develop co-operatively a common inventory check list of all pupil accommodation and other space under the jurisdiction of a school board and that each board develop and maintain on a current basis a complete record of its accommodation in accordance with the inventory check list.

C. Utilization of Existing Accommodation

The rate of utilization of classroom space in both elementary and secondary schools shows a high degree of efficiency for the Province as a whole. The average rate of utilization in September, 1970, at the elementary level was 96 per cent while it was 98 per cent at the secondary level. In a period of declining enrolments, however, it will not be possible to maintain high rates of utilization, though some of the obsolete or antiquated accommodation can be abandoned as excess usable space becomes available.

We recommend,

(4) that, to ensure utilization of facilities at the optimal level and as a means of ensuring that no decision is made to provide additional unnecessary accommodation, the chief executive officer report to his board as early as practicable in each school year the rate of utilization of all teaching areas and other space as shown in the inventory check list.

D. Need for Additional Accommodation

(a) The need for additional school accommodation as implied in forecasts submitted by school boards in 1970 and 1971 for the ensuing five-year and ten-year periods is for most boards far in excess of the number of pupil

places for which any real justification can be made. In general, the forecasts are not based on detailed studies of the board's requirements, nor do they take adequately into account probable overall enrolment patterns. They are, in too many cases, totally lacking in realism, and they provide further evidence that there must be more thorough and sophisticated planning in the process of assessment of need for additional school facilities.

We recommend,

(5) *that, in addition to the measures already cited, any proposal for additional accommodation, put forth by a board to the Ministry, include a detailed and fully documented justification for such accommodation and that in the absence of such justification no proposal be considered.*

(b) For more than twenty years the rapidly increasing enrolments at the elementary school level meant that both Public School boards and Separate School boards could provide accommodation at the fastest rate possible with little or no danger of overbuilding. The decelerating rate of increase in recent years and the decline in enrolments now being experienced, however, have already resulted in a small excess of classroom space in a number of school board jurisdictions. The situation is now being accentuated in certain areas by the transfer of assessment of a number of Roman Catholic ratepayers who are becoming Separate School supporters, under the provisions of The Separate Schools Act. The result is that some Separate School boards are providing additional accommodation for pupils for whom Public School boards have already made provision. Consequently, unless there is the closest co-operation between the two types of boards, and unless provision is made for the use of the excess accommodation of one board by another board which may be in need of additional pupil places, there will be a duplication of space with corresponding duplication of the costs of providing it. The amounts involved could reach many millions of dollars.

During the last twenty-five years, the people of Ontario provided school accommodation on an unprecedented scale. Now that enrolments have stabilized or are declining, the taxpayers can justly expect some abatement of the pressure imposed by twenty-five years of expansion. Under these circumstances, it is the strongly held view of the Committee that no waste or duplication of school accommodation should be permitted or tolerated. We are confident that

the educational objectives of the Province need not be in any way compromised by a resolute determination to avoid waste in the use of physical facilities, and we are confident that the people of Ontario share this view.

We recommend,

(6) that the total classroom accommodation within the same geographic area served by a Public School board and a Separate School board be based on the total enrolment of the two boards in that area. Where one board is able to justify the need for more accommodation, it should be required to consult with the other board to determine if its needs can be met by some co-operative effort. Only for the most compelling reasons should the accommodation problem of a board be met by the provision of additional accommodation when the necessary amount of accommodation is already available and unused by another board serving the same geographic area.

We further recommend that when any proposal for the construction of additional school accommodation is put forward to the Ministry of Education by a board after completion of the steps outlined in the preceding Recommendations, the proposal be considered in the light of the information contained in the up-to-date inventory check list and the space utilization data for each of the boards in the geographic area, together with detailed justification for the decision to request approval. It should be understood that the onus is on the school board to prove the need, and that it is the responsibility of the Regional Office of the Ministry of Education to examine the proposal in detail, to discuss with officials of the board any matter about which there may be questions or doubt, and to recommend acceptance of the need for accommodation only when all uncertainties about its validity have been removed.

E. Procedures for Approval of Capital Building Projects

The procedures for approval of additional school accommodation are contained in the publication, Capital Grant Plan 1971, issued by the Ministry of Education.

(1) When a school board submits to the Ministry of Education a building proposal for additional accommodation, the calculations of space allowances are based on the number of students in specific programs, the number of classrooms required to accommodate the students in each program, the square foot

allowance for each classroom for each type of program, and the total number of square feet. The latter figure then becomes the "Net Functional Floor Area". The total number of square feet for each type of classroom has a factor applied to it to determine the number of "Accommodation Units". The total of the results gives the "Project Accommodation Units". This latter figure is multiplied by an amount per Accommodation Unit to secure the "Calculated Approved Cost" for the project.

Some provision for flexibility exists in that the number of square feet allowed for a particular type of classroom varies within designated limits. In addition, allowances can be made for deviation from these limits to meet the requirements of experimental or innovative programs if these can be justified by the school board.

Each classroom is given a "pupil loading" in accordance with the program to be conducted in it. For example, pupils may be in kindergarten, regular elementary classes, special education, art, music, home economics and industrial arts. The number of pupils allowed for each type of classroom is listed in Appendix A of this Report. The cumulative total for all types of accommodation is the "rated capacity" of the building. Over a period of years, it has become common practice to recognize an effective capacity for each type of classroom at ten per cent below the formula figures.

The method described above is unnecessarily complicated. It had its origin at a time when there were many school boards with little or no experience in school construction and when these boards did not have personnel capable of planning and supervising the provision of accommodation.

We recommend.

(?) that the basic allowance for space and expenditure for a capital project be determined by the number of square feet per pupil and a dollar amount per square foot for each of the elementary and secondary levels and that the space and dollar allowances be determined by studies to be undertaken by the School Planning and Building Research Section of the Ministry of Education.

(b) A school board is required to submit each capital building project to the Ministry of Education for approval if any part of the expenditure is to qualify

for legislative grants or if capital funds to finance the project are to be secured from The Ontario Education Capital Aid Corporation or from other sources. If an expenditure is not eligible for legislative grant and if it is to be financed from current funds within the limit of one mill on equalized assessment (except Metropolitan Toronto where the amount is two mills of local assessment) at each of the elementary and secondary levels, it is not necessary for the board to submit the project to the Ministry of Education.

It is desirable that a complete inventory of all accommodation for each school board be maintained within the Ministry of Education if the Ministry is to make judgement about the necessity for additional space. This objective is unattainable as long as some of the capital projects being undertaken by boards are not submitted to the Ministry. Moreover, it would be helpful to school boards to have the comments and advice of officials of the Ministry of Education for all capital building projects.

We recommend,

(8) that expenditures by school boards from current funds for all sites and capital building projects, when the expenditures are not eligible for legislative grants, be submitted to the Ministry of Education, as a matter of information and for record purposes, in the same manner as expenditures which are financed by debentures or which are eligible for legislative grants.

(c) The Ministry of Education assists school boards in several ways in planning and developing accommodation. Ministry officials are available for consultation with representatives of boards, with architects and with planners, at the several stages in the processing of an approval for a building project. The Ministry issues a number of publications giving information and advice to assist boards to meet satisfactory standards. Some of the Guidelines suggest rather ideal layouts for particular areas of the instructional program. In some cases, these suggestions are unrealistic in that they necessitate expenditures which are in excess of the amounts which may be approved for legislative grant purposes. The effect of incorporating the ideal layouts for all subject areas into one school would be to make the cost exorbitant and prohibitive.

The services provided by the Ministry to school boards have been helpful in many ways. There is a need for an extension of these services in some areas

and the provision of additional services in others.

We recommend,

(9) that the Ministry of Education continue to provide consultation and advice to assist boards in the planning of school accommodation. Publications should include realistic guidelines and suggested standards and these should be kept up to date. The Architectural Services Section of the Ministry should carry on continuous research into the cost of accommodation as revealed by projects approved by the Ministry. The findings of such research into building costs for various types of construction materials, heating, lighting, ventilation, etc., in Ontario and in other jurisdictions should be reported regularly to all boards. Records should be maintained and studies conducted to show, for example, the comparative long range costs when initial costs and maintenance costs for different construction materials are added together.

(d) The plans for school buildings require the separate approval of a number of central agencies in addition to the Ministry of Education. These include the Ontario Fire Marshal, the Air Management Branch of the Ministry of the Environment, and the Ministry of Health. In a few cases, the local counterpart of the central agency performs the approval function. The procedures are for the most part the result of circumstances that existed at the time they were established. In the changed conditions which now exist, they are administratively cumbersome and wasteful of time and money.

It is still imperative that the requirements for fire safety, pollution control, and health protection be fully met. The creation of larger school units has enabled boards to employ supervisory staff who are knowledgeable and experienced in these areas. The several central agencies still have an important role to play in the development of standards in their special areas. It is no longer necessary, however, for them to be involved in the administrative process by which each set of plans is given approval.

We recommend,

(10) that each central agency, in co-operation with the Ministry of Education, maintain and revise, as circumstances may warrant, standards and requirements for school buildings in the areas of its special responsibility; that the Ministry of Education issue these specifications to school boards, architects,

and planners; and that the responsibility for ensuring that the requirements are met be given to one agency, the School Plant Approvals Section of the Ministry of Education.

(e) In recognition of the higher costs of school construction in the Northern parts of the Province, the Ministry of Education maintains three "Geographical Cost Zones". When approval is given for a building project in Zones 2 and 3 an allowance is made in accordance with a formula whereby a higher expenditure is permitted up to a ceiling and the actual expenditure up to this ceiling is approved for legislative grant purposes. Most of the Province is in Zone 1 where the basic cost values apply. Zone 2 embraces part of Nipissing District and the districts of Algoma, Cochrane, Manitoulin, Sudbury, and Timiskaming, while Zone 3 includes the districts of Kenora, Rainy River and Thunder Bay. Factors such as remoteness from the base of construction companies, weather conditions, nature of school sites, and transportation of building materials and equipment increase the total cost of school construction in the North.

We believe that there is justification for differentials in the amount of the expenditures and approvals for grant purposes for school buildings in various parts of the Province. While the justification for the differentials is probably greatest between the southern and northern parts of the Province, we have some doubt that the present allowances as set out in the Table of Values recognize adequately the differences that exist for school boards across the Province.

We recommend,

(11) that cost differentials for school construction in the Northern parts of the Province be continued but that they be based on the formula related to the cost per square foot, as set out in Recommendation 7. We further recommend that the Architectural Services Section of the Ministry of Education undertake a research study to determine the validity of the present zone boundaries and the cost differentials allowed. The study should consider the possibility that significant cost differences exist within each of the three existing zones and that the principle of cost differentials ought to be applicable among some areas in Southern Ontario as well. If the objective evidence supports these possibilities, the necessary adjustments should be made in the boundaries of the geographic zones and the amount of the cost differentials allowed.

(f) Great variation exists in the size of school sites and all too often there is little relationship between the size of the site, the design of the buildings, and the nature and extent of the programs conducted in them. These findings apply particularly in the core areas of older cities where sites were designated in the latter part of the last century or early in this one. Decisions to add to the size of the sites in built-up areas have resulted in huge capital outlays for land acquisition, in dislocation of residents whose homes have been expropriated, and in antipathy to the schools and the school system. In other cases, the original building on a site of adequate size at the time has had a number of additions made to it without any additional land being acquired. The result is that the building has encroached on the play area while the acreage thus reduced has been required to serve a greater number of pupils.

While there has been considerable improvement in the adequacy of school sites during the last two decades, there are still problems in securing the necessary land in new developments in larger centres and in suburban areas. Some progress has been made by school boards towards co-operative action in the designation and acquisition of a site large enough to meet the needs of two boards. In other situations, recreation councils and parks' boards have acquired land for their purposes adjoining school sites. These developments are highly desirable but are not yet widespread in their application.

We conclude that when a school site is originally designated it should be large enough to meet the needs resulting from maximum development of the area from which the student population will be drawn. There is substantial mutual benefit to be derived from co-operation among school boards in the designation and acquisition of one school site to serve the needs of the school boards in the area. The advantages can be extended to include municipal councils, planning boards, recreation councils, parks' boards, and possibly library boards. Wherever possible, the designation of a common site large enough to accommodate the variety of functions performed by some or all of these agencies would result in real advantages. Each body would be able to utilize more space than it could hope to have on a separate site. The total space necessary would be less in a joint venture on one large site than the total of the space for several separate developments. There would also be major and significant advantages from the integration of programs and activities which proximity would

permit while avoiding the duplication which remoteness of one agency from another seems to promote.

We recommend,

(12) that the Ministry of Education establish minimum standards for the size of school sites. These requirements should take into account the maximum potential enrolment for the area to be served by the school or schools to be erected on the site. Local authorities represented by school boards, municipal councils, planning boards, recreation councils, parks' boards, and library boards should work co-operatively in the planning of areas to be allocated to serve their particular purposes. Wherever possible, a common site large enough to accommodate the variety of functions performed by these agencies should be designated.

(g) Where there has been co-operation among local authorities in the planning of school sites, recreation centres, and park lands on adjoining properties, it has worked to the mutual advantage of school boards, municipal councils, and recreation councils. In a number of centres, it has been found feasible to reduce the actual size of the school site because of the availability of public park lands nearby. The possibility exists, however, that a school board could find itself with too limited a site if it should at some time in the future lose access to adjoining public park lands.

Under the provision of Section 33, subsection (9) of The Planning Act, as amended by Section 5, subsection (3) of The Planning Amendment Act, 1972, a municipal council may sell land conveyed to it to be used for park purposes within a period of five years with the approval of the Minister or after five years without the approval of the Minister. If, for any reason, a municipal council should dispose of park land adjoining a school site, it could result in inadequate space for the school's educational program and play area. Even one such example could work against the developing trend towards greater co-operation among local bodies in the use of public park land areas.

So that the planning of the size of school sites by boards can take into account adjoining park lands and so that there can be no doubt about the permanency of the designation of such lands for park purposes, the Committee feels that The Planning Act ought to be further amended to exclude park lands

adjoining school sites from the possibility of sale while the school site is in use for educational purposes.

We recommend,

(13) that The Planning Act, as amended by Section 5, subsection (3) of The Planning Amendment Act, 1972, be further amended to provide that where park land adjoins a school site the park land continue in use for that purpose at least as long as the school site is used for educational purposes.

F. Financing Capital Building Programs

(a) The estimated cost of new schools and additions built during the period 1946 to 1971 totals \$2.75 billions, of which \$1.40 billions was at the elementary level and \$1.35 billions at the secondary level. The number of pupil places provided at the elementary level exceeds by a small margin the total number of pupils enrolled in 1971. At the secondary level the number of places provided is slightly below the enrolment in 1971.

In 1970, the amount of outstanding indebtedness on principal for elementary school construction stood at \$900 millions and at \$420 millions for secondary. The interest charges are in addition to these amounts. The repayments in 1970 for both principal and interest were approximately \$116 millions and \$57 millions respectively for a total of \$173 millions.

The funds made available through The Ontario Education Capital Aid Corporation were at the \$200 million level each year for the three-year period 1969-70 to 1971-72 inclusive. The estimated amount for 1972-73 is \$159 millions.

The fact that a substantial proportion of the pupil enrolment is accommodated in schools constructed since 1946, that enrolments are decreasing in the elementary schools and will be decreasing in the secondary schools after 1977, and that outstanding capital indebtedness is at a high level, support the conclusion that expenditures for school construction should be sharply reduced. It is the Committee's view that this action can be taken without any detrimental effect on school programs.

We recommend,

(14) that the amount of capital money to be made available to The Ontario Education Capital Aid Corporation to provide accommodation in elementary and secondary schools be limited to \$50 millions per year, in terms of 1972 constant dollars, for each of the fiscal years 1973 to 1981 inclusive, a reduction of \$109 millions below the amount allocated for 1972.

(b) It will still be necessary to construct some additional pupil places to meet the essential needs of particular areas. There are a few growth areas where all existing accommodation is being fully utilized. Some other jurisdictions which have an excess of classrooms are not always able to use them fully because of local conditions or circumstances. In a few centres, the need to rehabilitate a school will occur. For most boards, however, the need for additional accommodation has been met to a substantial degree.

It is our view that the sum of \$50 millions a year is adequate to provide essential facilities required by school boards for the balance of this decade. This assumes, of course, that boards will confine their requests for funds for capital expenditures to provide only essential accommodation of the highest priority.

We recommend,

(15) that the Ministry of Education establish new criteria for the approval of building proposals to provide essential accommodation only, that the available capital funds be allocated on the basis of the highest priority and only when the need for accommodation cannot be met except by the construction of additional pupil places, and that the amount of the approvals in any year not exceed the amount of the allocation of \$50 millions to The Ontario Education Capital Aid Corporation.

(c) When a school board submits a building project to the Ministry of Education for final approval, the practice is to approve on the average approximately 90 per cent of the actual cost for legislative grant purposes.

While this policy may be designed to discourage a board from proceeding with a project because the board will have to pay ten per cent of the cost wholly out of local taxation, it does not seem to have had much of a deterrent effect.

It also means that boards, regardless of variations in local assessment, have to raise a common ten per cent amount. This imposes a proportionately heavier burden on boards with lower assessment. It also means that the principle of equalization applicable to the nine-tenths of the cost approved for grant purposes is denied for the unapproved one-tenth which must be paid wholly at the local level regardless of the variations in the ability of boards to pay.

We recommend,

(16) that the actual cost of a school building required for the educational program be accepted for legislative grant purposes for any project for which building proposal approval is given after January 1, 1973.

(d) At the present time, when a school board undertakes a building project it may, if it desires, provide accommodation which exceeds the standards established by the Ministry of Education. When this is done, the cost of the extended facilities is not eligible for approval for legislative grant purposes and the whole of the excess cost must be borne by the local taxpayers.

It is our view that some areas of the Province, particularly those with a relatively high assessment, have been able to provide accommodation in excess of essential requirements. We consider the standards set by the Ministry of Education to be fully adequate to permit a very high standard of education to be provided in all parts of the Province. Thus, it should be unnecessary in the future to exceed the Ministry's standards in the design and construction of school buildings using the type of formula referred to in Recommendation 7.

We recommend,

(17) that, when a formula for approval of capital projects is developed on the basis of area per pupil and cost per square foot, as proposed in Recommendation (7), all boards be required to provide accommodation for essential educational purposes within the calculated amount and that no excess expenditure by a board over this amount be permitted.

(e) In a large number of capital projects, approval is given for expenditures for facilities in addition to those considered essential for the basic school program. Examples of this type of accommodation are swimming pools, auditoria, and community recreation centres. Expenditures for these purposes are not

approved for legislative grant purposes so that the total cost of payment of debt charges for them are assessed to the local taxpayers. Authority exists in The Schools Administration Act for a school board to enter into an agreement with the council of a municipality in respect of the joint use of educational and municipal facilities.

It is our view that a school board ought to be able to make expenditures on its schools for additional facilities not considered essential to its educational program provided the money to construct the facilities is made available to the board from other sources, usually the municipal council.

We recommend,

(18) that a school board continue to have authority to enter into an agreement with municipal authorities to provide facilities in schools in addition to those essential to the educational program, that no part of the capital cost of such structures be borne by the school board, and that the total capital funds for these facilities be provided to the board by the municipal authority or authorities. We further recommend that, where these facilities are provided in a school, the board assume a reasonable share of the cost of operation of the facilities in relation to the board's share of the use of the facilities for the educational program.

(f) School boards have authority under the provisions of the various school Acts to issue debentures to finance capital building projects. The one exception is the Metropolitan Toronto School Board, which, under the provisions of The Municipality Of Metropolitan Toronto Act, must apply to the Metropolitan Council. The legislation in the latter Act preceded the general legislation in the various school Acts.

It is the view of the Committee that this anomaly should be removed and that the general legislation should apply to all school boards.

We recommend,

(19) that The Municipality Of Metropolitan Toronto Act be amended to delete section 1 (d) of Section 218 of the Act and that the general legislation contained in Section 35 of The Secondary Schools And Boards Of Education Act,

regarding the authority of a school board to issue debentures for permanent improvements, be made applicable to The Metropolitan Toronto School Board.

(g) The rate of grant on the proportion of the recognized extraordinary expenditure eligible for general legislative grants is now at a high level for most boards, with an average rate of about 80 per cent. Consequently, the Province pays a substantial proportion of annual repayment by school boards on the approved portion of the principal and interest for capital building programs. Since most debentures were issued for a twenty-year period, boards have considerable outstanding indebtedness as a result of the great amount of school construction in the 1950's and 1960's. In addition, the unapproved portion of expenditures for schools is repayable in its entirety by the boards. The result is that in spite of the high grant rate noted above, there is still a sizeable proportion of the costs which must be borne wholly by the local taxpayers.

Most of the debentures on which annual payment is now being made were sold at a time when local planning boards and municipal councils could determine the nature and extent of the development which might take place in their jurisdictions. Circumstances have changed considerably in the last few years. The need for overall planning on a broader basis has resulted, for example, in the development of the Toronto Centre Region Plan and the decision to build the community of Cedarwood in Ontario County in conjunction with the establishment of the new Pickering Airport. It is, in our view, unreasonable to expect school boards already making repayment on capital indebtedness incurred in the past to assume any part of the repayment for additional school construction made necessary by this type of development. This position is particularly justified since the new facilities will be required to serve a population in developments created by higher levels of government and designed to serve a much broader geographic area than is represented by the jurisdiction of the school board.

Several of our Recommendations are designed to make certain that only essential accommodation is provided while at the same time ensuring that where a genuine need exists it can be met without undue burden on taxpayers at the local level. Most of our Recommendations are interdependent. For example, the requirement that any request be fully documented and justified, that any accommodation

approved for construction must be provided within the formula adopted by the Ministry of Education, that the amount of money to be made available in any one year not exceed \$50 millions have all been put forward as parts of an overall plan which includes our next Recommendation. Consequently, it must be recognized that the allocation of \$50 millions should be a firm maximum sum and it is on this basis that we make our next proposal.

We recommend,

(20) *that the Ministry of Education agree to pay 100 per cent of the annual repayment of principal and interest on debentures issued by school boards to provide school building accommodation for which building proposal approval is given by the Ministry of Education after January 1, 1974.*

(h) A school board may take expenditures from current funds in any year for permanent improvements referred to in subparagraphs (i), (ii), (iii), and (vii) of paragraph 18 of subsection 2 of Section 1 of The Schools Administration Act. The authority for the expenditures is found in subparagraphs (i) and (ii) of subsection (1) (d) of Section 31 of The Secondary Schools and Boards of Education Act, as amended by Section 7 of The Secondary Schools and Boards of Education Amendment Act, 1972; in subparagraph (iv) of subsection (1) (b) of Section 51 of The Public Schools Act, as amended by Section 14 of The Public Schools Amendment Act, 1972; and in Section 65 of The Separate Schools Act, as amended by Section 21 of The Separate Schools Amendment Act, 1972. The amount of the permissible expenditure is calculated at one mill on the total of the equalized assessments supporting a particular board. In the case of a board of education one mill on the equalized assessment can be spent at each of the elementary and secondary school levels. The one exception to the general legislation contained in The Secondary Schools and Boards of Education Act, and the amendment in 1972, is the Metropolitan Toronto School Board. Under the provisions of subparagraph (v) of paragraph (g) of Section 127 of The Municipality of Metropolitan Toronto Act, The Metropolitan Toronto School Board may make expenditures for permanent improvements of an amount not to exceed two mills on the dollar on the appropriate assessment in the Metropolitan Area for each of public school purposes and of secondary school purposes. It should be noted that in this case the calculation of the expenditure is based on local assessment rather than equalized assessment which is applicable in the general legislation.

It is our view that existing arrangements for the financing of new buildings and additions for instructional purposes by the issue of debentures and the recommendations which we have made for the payment of grants on the annual instalments of principal and interest are adequate to ensure that essential accommodation is provided. It is, therefore, unnecessary "to provide for the acquisition or erection of a building used for instructional purposes and any addition, alteration or improvement thereto" by an expenditure from current funds of up to one mill in the dollar on equalized assessment at each of the elementary and secondary levels. The provision of two mills on local assessment in Metropolitan Toronto seems to us to be highly excessive. The limits should be reduced so that the taxpayer will not be required to bear in any one year the cost of a school or schools which will last for many years.

We recommend,

(21) (i) that The Secondary Schools and Board of Education Act, The Public Schools Act, and The Separate Schools Act, as amended in 1972, be further amended to reduce the expenditure a board may make from current funds for permanent improvements from the equivalent of one mill in the dollar on equalized assessments at each of the elementary and secondary levels to the equivalent of one-half mill in the dollar on equalized assessments at each level, and

(ii) that The Municipality of Metropolitan Toronto Act be amended to reduce the expenditure a board may make from current funds for permanent improvements from the equivalent of two mills in the dollar on local assessment at each of the elementary and secondary levels to the equivalent of one-half mill in the dollar on local assessment at each level.

(1) The cost to acquire a school site varies greatly from board to board and from area to area under the jurisdiction of the same board. The present formula for approval for grant purposes of an expenditure by a board for a site is based on the equalized assessment of the property two years prior to the purchase or the actual cost whichever is the lesser. Often the necessity to acquire a site arises from a development which was not contemplated when the assessment was established. In these cases the assessment bears little relationship to the actual price of land at the time of purchase of a site. The result is that usually only a small proportion of the cost is eligible for grant.

It is most difficult to develop criteria which will provide a reasonable basis for the payment of legislative grants on the purchase price of school sites. The great variety of conditions and circumstances determining the cost in different parts of the Province is a major factor in the problem. It is our view that the cost of school sites ought to be paid by local taxpayers and that if this is the case there will be the maximum incentive to ensure that the price is reasonable and just.

The financial relief afforded to local taxpayers by our other Recommendations, particularly the Recommendation that 100 per cent of the cost of capital building projects be paid by the Ministry of Education, will enable them to assume the small proportion of the school site cost paid by legislative grant under the present formula. Since it will no longer be necessary for boards to provide from current funds for the acquisition or erection of a building used for instructional purposes, it will be possible to accommodate the purchase price of school sites within the one-half mill expenditure permitted for permanent improvements.

We recommend,

(22) that school boards assume the total cost of the acquisition of a school site and an addition or an improvement to a school site, effective January 1, 1973, with the cost to be provided as a capital expenditure from current funds.

CHAPTER 2

ENROLMENT

The basic consideration in planning the amount of school accommodation needed is the projected enrolment. Early attempts to provide the necessary information were for the most part unsophisticated and inclined to place an emphasis on the immediate future. It is only in recent years that the Department of Educational Planning, The Ontario Institute for Studies in Education, has undertaken to provide projections on a Provincial basis and by county and district. The fact that projections have been established against which to compare actual results gives promise of more reliable estimates in the future. The Planning and Research Branch, Ministry of Education, has also begun to publish its projections of enrolment. Both these sources were used in the development of the projection which we have adopted for purposes of this study.

Elementary - Actual - 1946-1971

In 1946, the total enrolment in the elementary schools of the Province, Public Schools and Roman Catholic Separate Schools, was 539,012. (Table 1 and Graph 1) The increase in 1947 was 11,023 pupils. The spectacular rise began in 1951 when the enrolment went to 654,506 from 612,182 in 1950, or 42,324 pupils in one year. Thereafter, the increases continued at a high level until the peak of 59,221 was reached in 1957. This latter figure is equal to the total present population of the City of Brantford. Throughout the decade of the 1950's, an increase of considerable magnitude was repeated annually. Between 1951 and 1961, the total increase in enrolment was 508,547, or a population equal to three-quarters of the present population of the City of Toronto.

In the fifteen-year period, 1946 to 1961, the enrolment more than doubled from 539,012 to 1,163,053, an increase of 624,041, or 116 per cent. It was necessary, therefore, to provide in that fifteen-year period accommodation sixteen per cent in excess of all the accommodation which had been accumulated up to 1946.

By 1970, the enrolment reached a peak of 1,465,488, almost three times the figure in 1946. In 1967, a deceleration of the rate of increase had begun. The following year, the increase dropped sharply and by 1971 there was an actual decrease of 8,648 from the enrolment in 1970.

TABLE 1
ENROLMENT, ANNUAL INCREASE, IN ELEMENTARY SCHOOLS
1946 to 1971¹

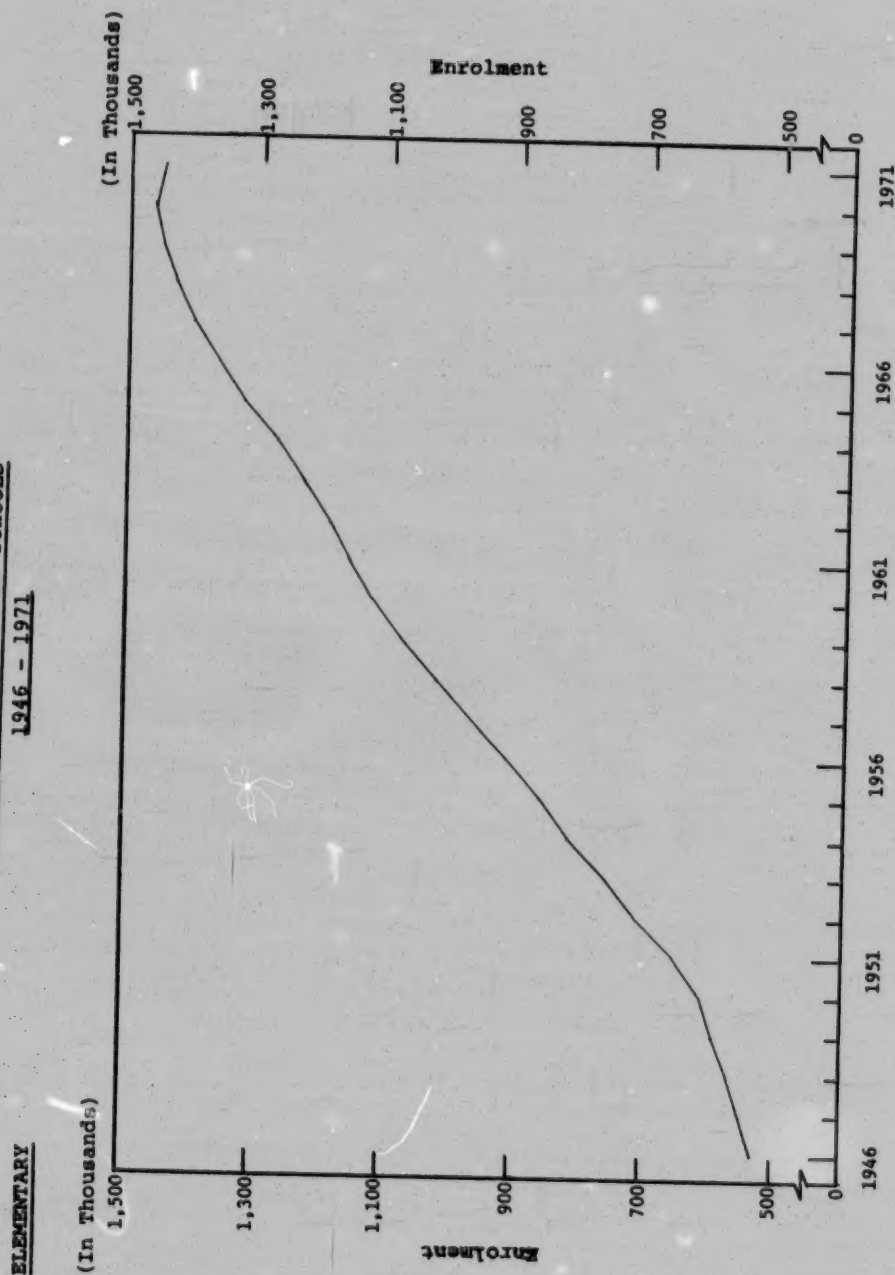
ELEMENTARY

<u>School Year</u>	<u>Enrolment</u>	<u>Annual Increase</u>
1946	539,012 ^a	
1947	550,035 ^a	11,023
1948	571,459 ^a	21,424
1949	592,726 ^a	21,267
1950	612,182 ^a	19,456
1951	654,506 ^a	42,324
1952	712,892 ^a	58,386
1953	768,397 ^a	55,505
1954	821,736 ^a	53,339
1955	863,614	41,878
1956	911,896	48,282
1957	971,117	59,221
1958	1,027,598	56,481
1959	1,081,649	54,051
1960	1,126,388	44,739
1961	1,163,053	36,665
1962	1,197,029	33,976
1963	1,233,164	36,135
1964	1,278,473	45,309
1965	1,320,043	41,570
1966	1,364,871	44,828
1967	1,405,052	40,181
1968	1,430,590	25,538
1969	1,456,117	25,527
1970	1,465,488	9,371
1971	1,456,840	-8,648

a Net enrolment 1946-1954, total enrolment 1955-1971

1 Reports of the Minister of Education, 1946-1971

GRAPH 1
ENROLMENT IN ELEMENTARY SCHOOLS
1946 - 1971



Elementary - Projected - 1972-1981

Table 2 presents our enrolment projects for the Province for the period from 1972 to 1981. They are based on work done by the Department of Educational Planning, The Ontario Institute for Studies in Education, in their projections of enrolment for grades 1 to 8 and auxiliary classes.¹ Estimate 2 of their two estimates was chosen for incorporation in our projection. The projections of Estimate 2 developed by the Institute for each county and district for grades 1 to 8 and auxiliary classes were also utilized in this study.

Since the Institute did not include figures for kindergarten and grades 9 and 10 in its projections, we used projections developed by the Statistical Unit, Department of Education,² for these grades. The projections for kindergarten and grades 9 and 10 by the Statistical Unit were added to secure the composite projection in Table 2.

The Statistical Unit did not develop projections for kindergarten and grades 9 and 10 by county and district. So that the projections for the local level would be complete, we made a breakdown of the composite figures prepared by the Statistical Unit and added them to the figures for grades 1 to 8 and auxiliary classes to secure a total projection for each county and district.

More recently, new projections have been issued by the Institute³ and the Ministry of Education⁴ in each of the areas with which their previous projections dealt. To the extent that they vary from their earlier projections they tend to confirm that the figures in Table 2 ought to be considered maximum enrolments for the period to 1981.

¹Watson, C., Quazi, S., and Kleist, A., Ontario Elementary School Enrollment Projections to 1981/82, Part 2, (1971 Projection), The Ontario Institute for Studies in Education/Enrollment Projections 6, Toronto, 1971.

²Ontario Elementary and Secondary School Enrolment Projections, 1971-1981, Statistical Unit, Ontario Department of Education, Toronto, July 7, 1971.

³Watson, C., Quazi, S., Kleist, A., and Siddiqui, F., Ontario Elementary School Enrollment Projections to 1981/82, The Ontario Institute for Studies in Education, June, 1972

⁴Ontario Elementary and Secondary Enrolment Projections, 1972-1982, Planning and Research Branch, Ministry of Education, Ontario, Toronto, June 30, 1972.

TABLE 2

ENROLMENT, ANNUAL INCREASE, IN ELEMENTARY SCHOOLS

1961 - 1981

Actual Figures 1961 to 1971¹

Projections 1972 to 1981

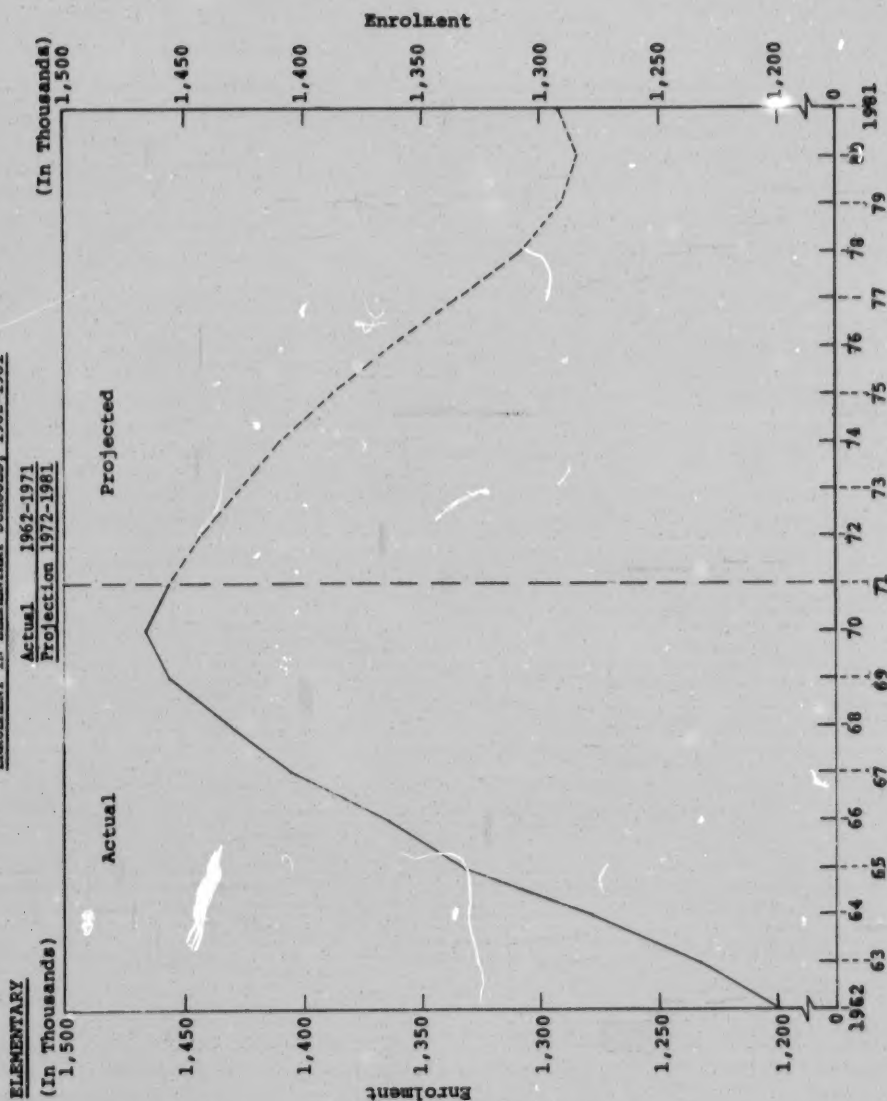
ELEMENTARY

<u>School Year</u>	<u>Enrolment</u>	<u>Annual Increase</u>
1961	1,163,053	36,665
1962	1,197,029	33,976
1963	1,233,164	36,135
1964	1,278,473	45,309
1965	1,320,043	41,570
1966	1,364,871	44,828
1967	1,405,052	40,181
1968	1,430,590	25,538
1969	1,456,117	25,527
1970	1,465,488	9,371
1971	1,456,840	- 8,648
1972	1,444,032 ²	-12,808
1973	1,426,577	-17,455
1974	1,409,350	-17,227
1975	1,387,715	-21,635
1976	1,362,864	-24,851
1977	1,335,622	-27,242
1978	1,307,742	-27,880
1979	1,291,441	-16,301
1980	1,284,969	- 6,472
1981	1,292,022	7,053

¹ Reports of the Minister of Education, 1961-1971

² Details of the factors considered in development of this projection will be provided in a subsequent report of the Committee on the Costs of Education.

CHAPTER 2
ENROLMENT IN ELEMENTARY SCHOOLS, 1962-1981



Our projection in Table 2 shows a continuing decrease in enrolment each year until 1980 when a low of 1,284,969 will have been reached. The total decrease between 1971 and 1980 is projected at 171,871 or 11.8 per cent. Graph 2 illustrates the trend for the decade.

Secondary - Actual - 1946-1971

The enrolment increases at the secondary school level are even greater proportionately than at the elementary level. (Table 3 and Graph 3) In 1946, the total enrolment was 123,846. As might be expected, the increase in numbers was minimal and relatively static during the 1940's. By 1953, there was a modest increase to 148,744. But then the impact of the higher enrolments of previous years in the elementary schools began to be felt at the secondary level. For each of the years from 1954 to 1959 inclusive, the annual increase was within the range of 11,000 to 19,000. By 1960, the total enrolment had more than doubled from 123,846 in 1946 to 262,775.

In 1961, there was an increase of 36,402 over the enrolment in 1960. From 1961, the annual increase was substantial, averaging about 30,000 a year for ten years. The total enrolment in 1971 of 574,520 was more than 4.5 times the enrolment in 1946.

The peak increase in any one year took place in 1968 when 37,071 additional students were enrolled. In 1969, the rate of increase began to decelerate and has continued this trend through 1971.

Secondary - Projected - 1971-1981

Table 4 presents projected enrolments for the next decade. The projection in the first column designated Estimate A was developed early in the work of the Committee. It was based on projections made by the Department of Educational Planning, The Ontario Institute for Studies in Education,¹ but

¹Watson, C., Quazi, S., and Kleist, A., Ontario Secondary School Enrollment Projections to 1981/82 (1969 Projection), Department of Educational Planning, The Ontario Institute for Studies in Education/Enrollment Projections 5, Toronto, 1969, p.10.

TABLE 3
ENROLMENT, ANNUAL INCREASE, IN SECONDARY SCHOOLS
1946 to 1971¹

SECONDARY

<u>School Year</u>	<u>Enrolment</u>	<u>Annual Increase</u>
1946	123,846 ^a	
1947	123,085 ^a	- 761
1948	125,234 ^a	2,149
1949	127,250 ^a	2,016
1950	131,215 ^a	3,965
1951	133,556 ^a	2,341
1952	141,091 ^a	7,535
1953	148,744 ^a	7,653
1954	160,166 ^a	11,422
1955	174,562	14,396
1956	185,605	11,043
1957	203,525	17,920
1958	222,075	18,550
1959	237,576	15,501
1960	262,775	25,199
1961	299,177	36,402
1962	331,578	32,401
1963	364,210	32,632
1964	395,301	31,091
1965	418,738	23,437
1966	436,026	17,288
1967	463,736	27,710
1968	500,807	37,071
1969	530,679	29,872
1970	556,913	26,234
1971	574,520	17,607

^a Net enrolment 1946-1954, total enrolment 1955-1971

¹ Reports of the Minister of Education, 1946-71

GRAPH 3
ENROLMENT IN SECONDARY SCHOOLS
1946 - 1971

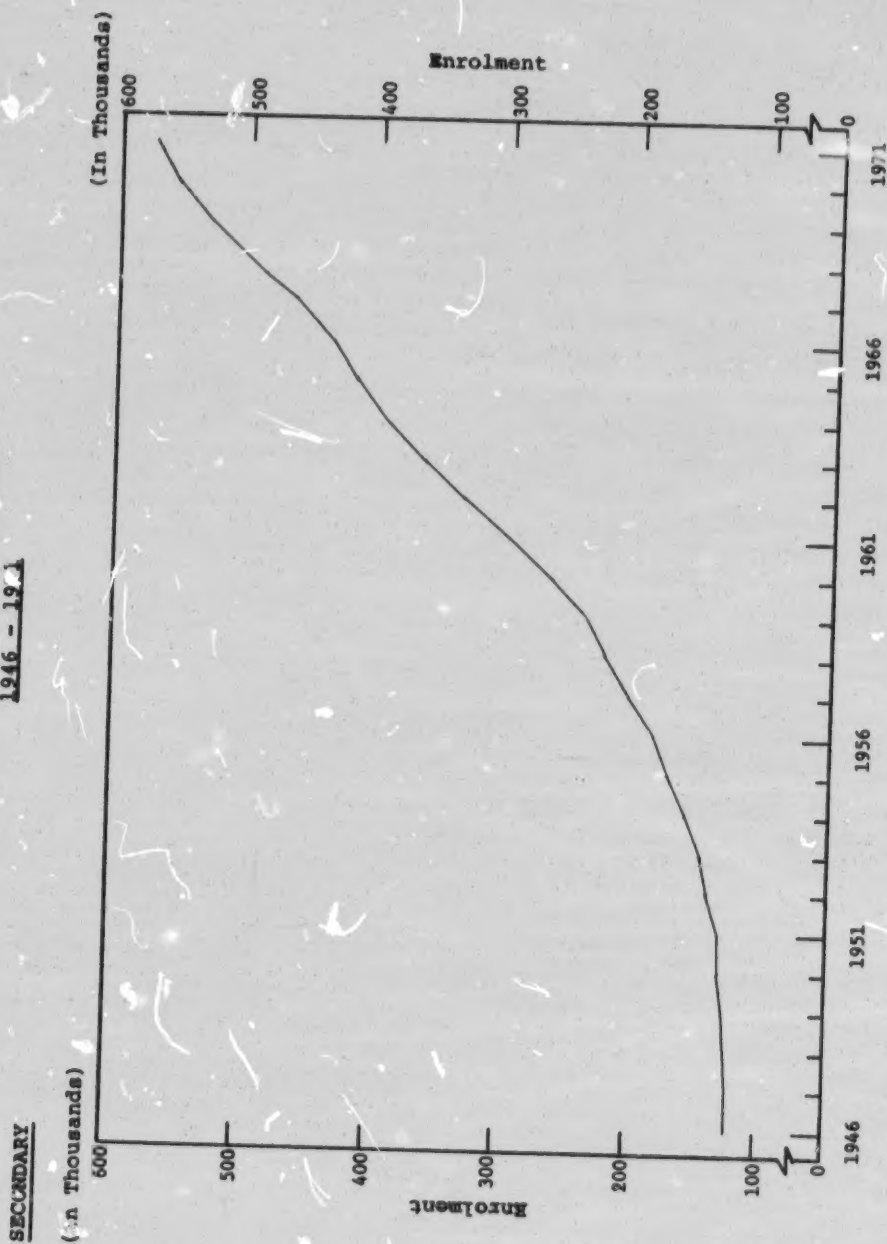


TABLE 4
ENROLMENT, ANNUAL INCREASE, IN SECONDARY SCHOOLS
1961-1981

Actual Figures 1961 to 1971¹
Projections 1972 to 1981

<u>SECONDARY</u>				
<u>School Year</u>	<u>Enrolment</u>		<u>Annual Increase</u>	
1961	299,177		36,402	
1962	331,578		32,401	
1963	364,210		32,632	
1964	395,301		31,091	
1965	418,738		23,437	
1966	436,026		17,288	
1967	463,736		27,710	
1968	500,807		37,071	
1969	530,679		29,872	
1970	556,913		26,234	
1971	574,520		17,607	
	<u>Estimate A</u>	<u>Estimate B</u>	<u>Estimate A</u>	<u>Estimate B</u>
1972	592,023 ^{2,4}	594,565 ³	17,503 ^{2,4}	20,045 ³
1973	607,940	616,565	15,917	22,000
1974	624,332	634,841	16,392	18,276
1975	636,718	645,990	12,386	11,149
1976	643,932	651,481	7,214	5,491
1977	646,041	652,620	2,109	1,139
1978	645,743	650,457	-298	-2,163
1979	643,023	636,884	-2,720	-13,573
1980	628,333	621,462	-14,690	-15,422
1981	606,299	606,708	-22,034	-14,754

¹ Reports of the Minister of Education, 1961-1971

² Projection in this column adapted from Watson, Cicely, Quazi, Saeed, and Kleist, Aribert, ONTARIO SECONDARY SCHOOL ENROLLMENT PROJECTIONS TO 1981/82, The Ontario Institute for Studies in Education, Toronto, 1969

³ Projection in this column taken from Watson, Cicely, Quazi, Saeed, and Kleist, Aribert, ONTARIO SECONDARY SCHOOL ENROLLMENT PROJECTIONS TO 1981/82, The Ontario Institute for Studies in Education, Toronto, June, 1972

⁴ Details of the factors considered in development of this projection will be provided in a subsequent report of the Committee on the Costs of Education

was a modification downward of Estimate 2 to take into account the actual experience from the time of the original projection.

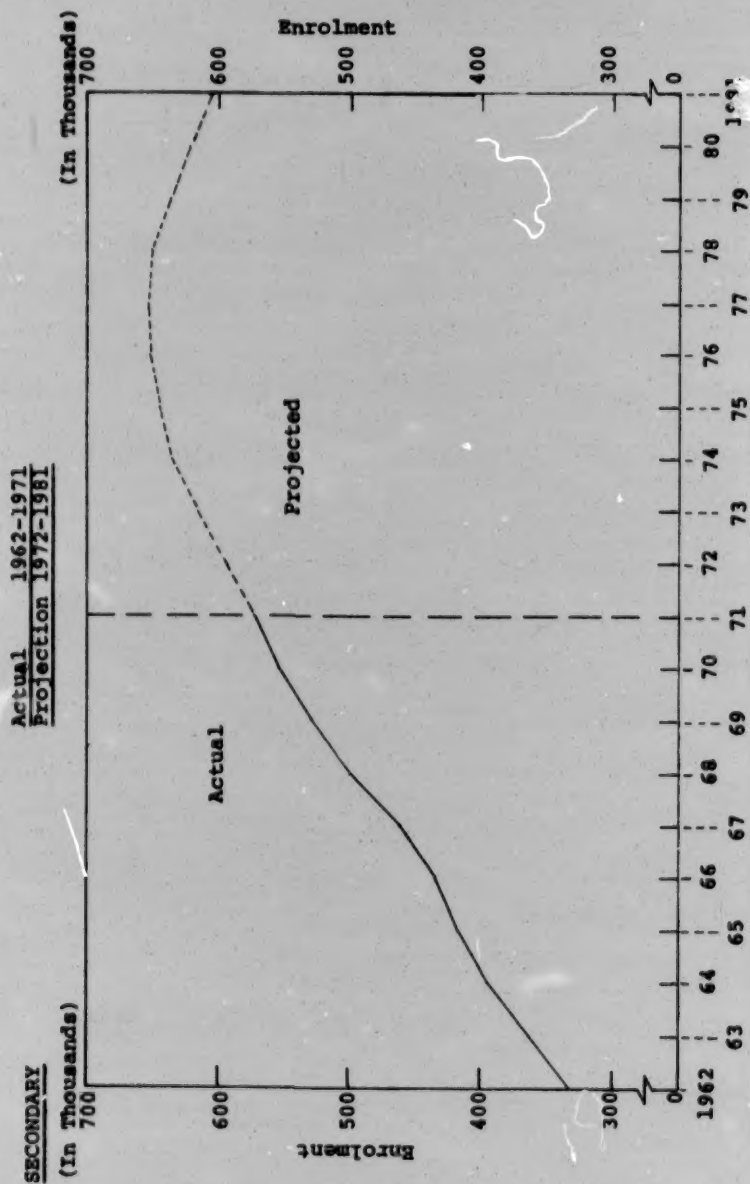
The projection¹ in the second column designated Estimate B is the latest Estimate 2 made by the Institute. The figures are substantially lower than the Institute's 1969 projection but slightly higher than the projections for the years 1972 to 1978 in Estimate A. A third projection not included in Table 4 but very close to Estimate 2 of the Institute's 1969 projection was developed by the Committee in 1971 to serve as the basis for our study of the utilization of accommodation by school boards. Even though it was recognized that the figures were high, they formed the basis for the only projections for each county and district available at the time. Consequently, the conclusions developed from the use of these high figures must be interpreted in the light of the fact that the actual figures will probably be considerably lower.

Our projection in Estimate A shows an increase in the range of about 16,000 to 17,500 students for each of the next three years. A rapid decline in the rate of increase will begin in 1975. The peak in total enrolment will be reached in 1977 at an estimated 646,041 students. Thereafter, an actual decrease will occur throughout the period from 1978 to 1981, when the enrolment will have returned to the level of 1973. Consequently, while some increase can be anticipated in the years immediately ahead, it will be much less than in the 1960's and will be at a diminishing rate until the actual decrease occurs in 1978. (See Graph 4)

¹Watson, C., Quazi, S., and Kleist, A., Ontario Secondary School Enrollment Projections to 1981/82, (Mimeographed), The Ontario Institute for Studies in Education, Toronto, June, 1972, p.3.

GRAPH 4

ENROLMENT IN SECONDARY SCHOOLS, 1962-1981



CHAPTER 3

ACCOMMODATION

Background

Many of the characteristics of the schools which were established as the system evolved in the nineteenth century in Ontario persisted well into the twentieth century. Circumstances of pioneer days placed an emphasis on development of the "common school" as a local enterprise. Among the important early influences in support of this pattern were the distance a child could walk to school, the type and condition of the roads, the means of communication, the dependence on animals for transportation, and the large proportion of the population living in rural areas.

Over the years the common school had evolved into the Public Schools and the Separate Schools. The grammar schools had led to the creation of the High Schools. Some provision had been made for teaching the program of grades 9 and 10 in Fifth Classes in elementary schools. Continuation Schools embracing grades 9 to 12 were organized in many smaller communities.

As the conditions of society changed, some attempts were made to alter the provisions for education. Beginning after World War I, proposals to establish Consolidated Schools in a few centres in the Province received some attention. This movement did not, however, gain widespread support and only a small number of schools of this type were constructed. A campaign in the late 1930's and 1940's to extend the geographic size of the administrative unit for elementary schools gained considerable acceptance as the "township school area". In the late 1940's and the 1950's, high school districts were formed to bring the larger unit of administration to the secondary school level. The new administrative structures ultimately resulted in the closing of many small, mostly one-room, rural elementary schools and the establishment of central schools. At the secondary level many small Continuation Schools were closed and larger secondary schools were built in more populous centres. Fifth Classes were practically eliminated from the Public Schools. These changes were made possible by developments in society represented by the widespread use of the motor vehicle, new and better roads, movement of population from rural to urban areas, and the increase in the variety of methods of earning a living.

But other circumstances in society almost precluded or made impossible the provision of new school buildings for a period of fifteen years from 1930 to 1945. The "Great Depression" of the 1930's saw many municipalities in financial difficulties. A considerable number were rescued from bankruptcy by intervention of the Department of Municipal Affairs which placed them under supervision. This action meant that it was impossible for a municipality to assume additional debenture indebtedness. The construction of schools was practically eliminated.

With the coming of World War II, building materials were unavailable for school construction because of the needs of an all-out war effort. While it was necessary to construct some pupil places for children living in Wartime Housing in new locations, by and large existing school accommodation at the elementary level was utilized to provide facilities for children from these developments. Fortunately, the low birth rate, which was a reflection of the economic situation in the 1930's, meant that some excess space was available for these children in most larger centres.

At the end of World War II, the birth rate was still relatively stable so that the limitations imposed by the continuing unavailability of building materials were not too serious. However, with the formation of new families at the end of the War, the greatly increased birth rate, and the buoyant economic development, it was evident that a great deal more new school accommodation would be required. The extent and magnitude of that increase exceeded almost every expectation and forecast. The result was that a great "boom" in school building has taken place at the elementary level since the latter half of the 1940's. After the initial wave of increased enrolment moved through the elementary schools, it resulted in a similar spectacular increase in building at the secondary school level beginning in the mid 1950's and reaching its peak in the 1960's. The combination of non-construction of schools in the 1930's and the impossibility of provision of new schools during World War II meant that the total school plant had aged without any adequate renewal and that there had been created a backlog of need for new facilities. The population explosion following World War II added a substantial new demand which compounded the problem facing school boards. The balance of this chapter is a summary of the accommodation provided to meet the situation.

Elementary School Accommodation Provided, 1946-1971

The number of pupil places provided at the elementary school level and the estimated cost of them for the period 1946 to 1971 are shown in Table 5 and Graphs 5 and 6. During the years prior to the mid 1950's, the number of new pupil places built did not keep pace with the increasing enrolment. Beginning in 1954, however, after boards had had some experience in the construction of additional accommodation, they were able to meet the demands created by greater numbers of pupils and the needs resulting from the replacement of some old, obsolete buildings and from the consolidation of small units into central schools. The enrolment in 1971 was 1,456,840 so that the cumulative increase in enrolment during this twenty-five year period was 917,828. The number of building projects completed was 8,692 to provide 1,463,251 pupil places at an estimated cost of \$1,406,182,000. Consequently, during this period school boards provided 6,411 pupil places in excess of the total enrolment in 1971. Some explanation of the seeming paradox that more places were provided than needed for the total enrolment in 1971 is called for, particularly since a considerable number of pupils are still attending schools built prior to 1946. Because there has been a continuing shift of population from rural to urban areas, some accommodation provided in rural areas in the immediate post World War II period has been abandoned due to decreasing enrolments. At the same time, where families have moved to urban centres it has become necessary to provide accommodation for their children in their new locations, in effect requiring a second provision for the same pupils.

As roads have improved and school bus transportation has become easier to provide, there has been a trend towards consolidation of small schools into larger units in an endeavour to provide better quality education. The shortage of qualified teachers over most of this period and the inability to attract them to schools where several grades would have to be taught in one classroom gave an impetus to this trend. Changes in organizational patterns represented by the senior public school, for example, have altered attendance districts and resulted in shifts in pupil enrolment. In times of expanding enrolment throughout the grades, this has not been a highly significant factor in terms of additional pupil places required. It has often been possible to

TABLE 5
SCHOOL BUILDING CONSTRUCTION, NUMBER
OF PUPIL PLACES PROVIDED, AND ESTIMATED
COSTS, 1946-1971¹

New Schools and Additions

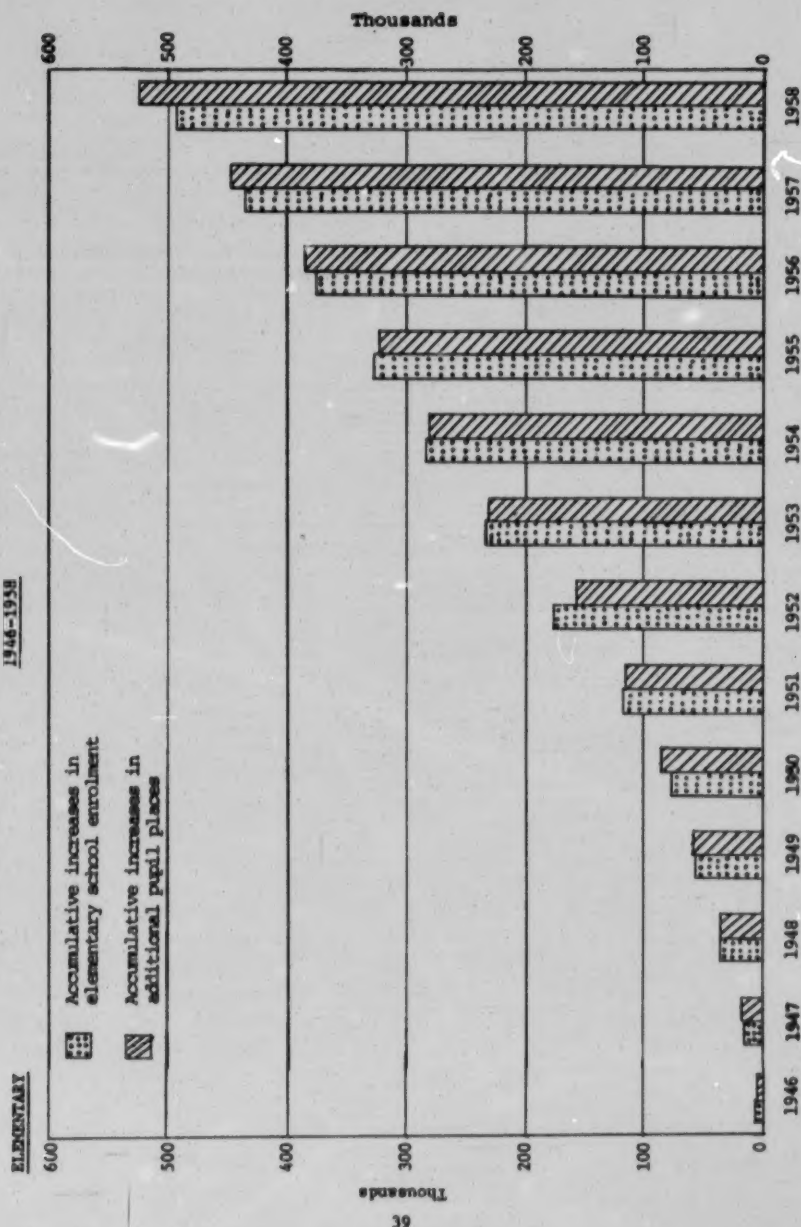
ELEMENTARY

Year	Increased Enrolment	Number of Building Projects ²	Pupil Places: New and Replacement	Estimated Cost \$
1946		89	6,500	2,600,000
1947	11,023	132	11,400	6,100,000
1948	21,424	155	18,400	10,900,000
1949	21,267	190	22,500	16,400,000
1950	19,456	198	27,300	17,500,000
1951	42,324	241	31,000	21,300,000
1952	58,386	217	40,740	29,600,000
1953	55,605	303	45,675	33,200,000
1954	52,239	396	57,400	33,700,000
1955	41,878	425	63,000	39,300,000
1956	48,282	379	60,100	37,700,000
1957	59,221	417	64,480	43,950,000
1958	56,481	451	74,735	51,085,000
1959	54,051	427	73,605	56,672,000
1960	44,739	529	78,750	59,938,000
1961	36,665	452	66,150	53,301,000
1962	33,976	395	58,500	50,704,000
1963	36,135	412	66,730	58,707,000
1964	45,309	457	77,385	71,145,000
1965	41,570	480	84,280	84,497,000
1966	44,828	471	82,145	92,707,000
1967	40,181	330	72,800	91,117,000
1968	25,538	355	77,742	114,417,000
1969	25,527	333	67,374	115,395,000
1970	9,371	243	74,074	116,832,000
1971	-8,648	215	60,486	97,415,000
Total	917,828	8,692	1,463,251	\$1,406,182,000

- Notes: 1. Enrolment increases are based on September enrolments.
2. Building projects are counted in the year of completion.
3. No account is taken in this table of pupil-places lost as a result of the following factors: shift from urban to suburban areas, fire losses, replacement of temporary and obsolete accommodation, and abandonment of small buildings.

¹ Reports of the Minister of Education, 1946-1971

GRAPH 3
ENROLLMENT INCREASES AND ADDITIONAL PUPIL PLACES IN ELEMENTARY SCHOOLS
1946-1958



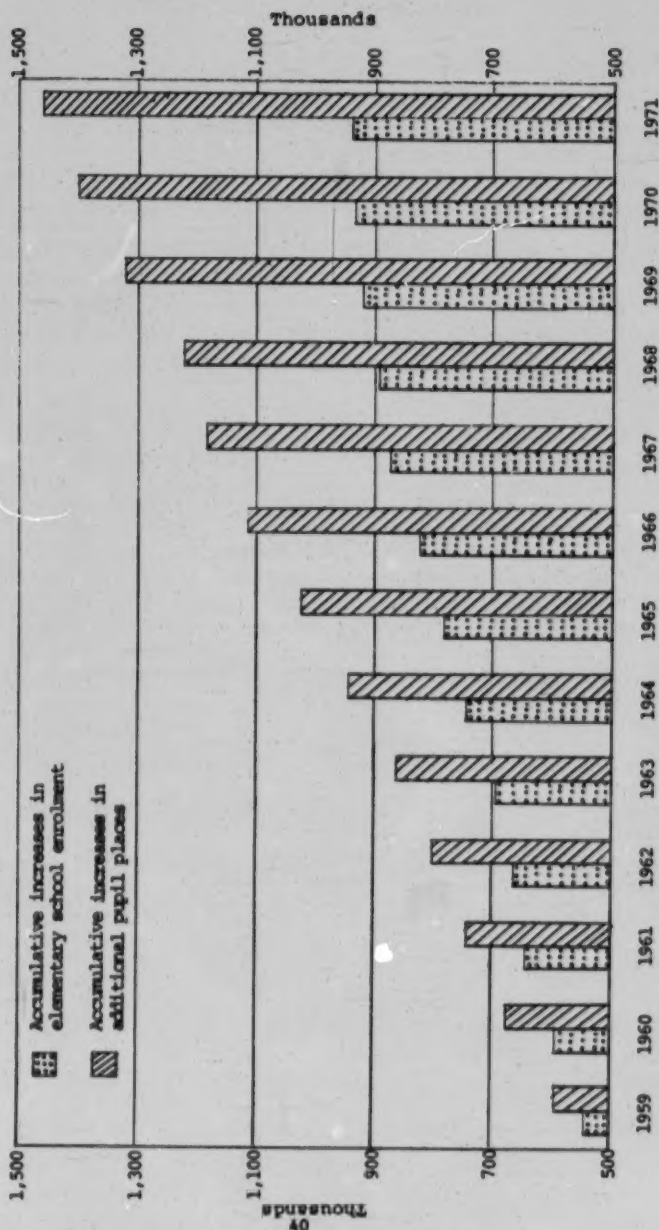
1 Graph 5 and Graph 6 are based on different scales.

GRAPH 6

ENROLMENT INCREASES AND ADDITIONAL PUPIL PLACES IN ELEMENTARY SCHOOLS

1959-1971

ELEMENTARY



1 Graph 5 and Graph 6 are based on different scales.

fill vacancies created by the transfer of pupils in grades 7 and 8 or grades 6, 7 and 8 with younger pupils enrolling in the earlier school years. Nevertheless, organizational changes have resulted in the abandonment of some accommodation.

Secondary School Accommodation Provided, 1946-1971

The number of pupil places provided at the secondary school level and the estimated cost of them for the period 1946 to 1971 are shown in Table 5. The annual provision of new pupil places exceeded enrolment increases slightly until 1961. Thereafter, while there were fluctuations from year to year, there was a phenomenal increase in the number of new pupil places provided during the 1960's. The cumulative increase in enrolment during the twenty-five year period from 1946 to 1971 was 450,674. The number of building projects completed was 1,571 to provide 550,480 pupil places at an estimated cost of \$1,360,507,000. The total enrolment in 1971 was 574,520, so that school boards had provided new pupil places for all but 24,040 students in attendance in 1971. The cumulative total of increases in secondary school enrolment and the corresponding cumulative total of pupil places provided for the years 1946 to 1971 are shown in Graphs 7 and 8.

Some of the factors which exerted an influence at the elementary school level also help to explain the provision of accommodation at the secondary level almost equal to the space required for the total student body in 1971. In addition, the movement towards provision of a broader spectrum of courses to supplement the more academically-oriented programs resulted in an increase in the number of comprehensive secondary schools offering technical and vocational and business and commerce subjects. To achieve this objective, small schools with low enrolments were of necessity phased out to provide a school with an enrolment large enough to justify the introduction of the wider choice of options. With the larger number of choices open to students, the real interests and needs of a greater proportion of the students could be met. The result was a substantial increase in the retention rate of the secondary schools, particularly among those for whom academic programs alone had little appeal. The combination of these influences resulted in a greatly expanded physical plant to meet the new circumstances.

TABLE 6
SCHOOL BUILDING CONSTRUCTION, NUMBER
OF PUPIL PLACES PROVIDED, AND ESTIMATED
COSTS, 1946-1971

New Schools and Additions

SECONDARY

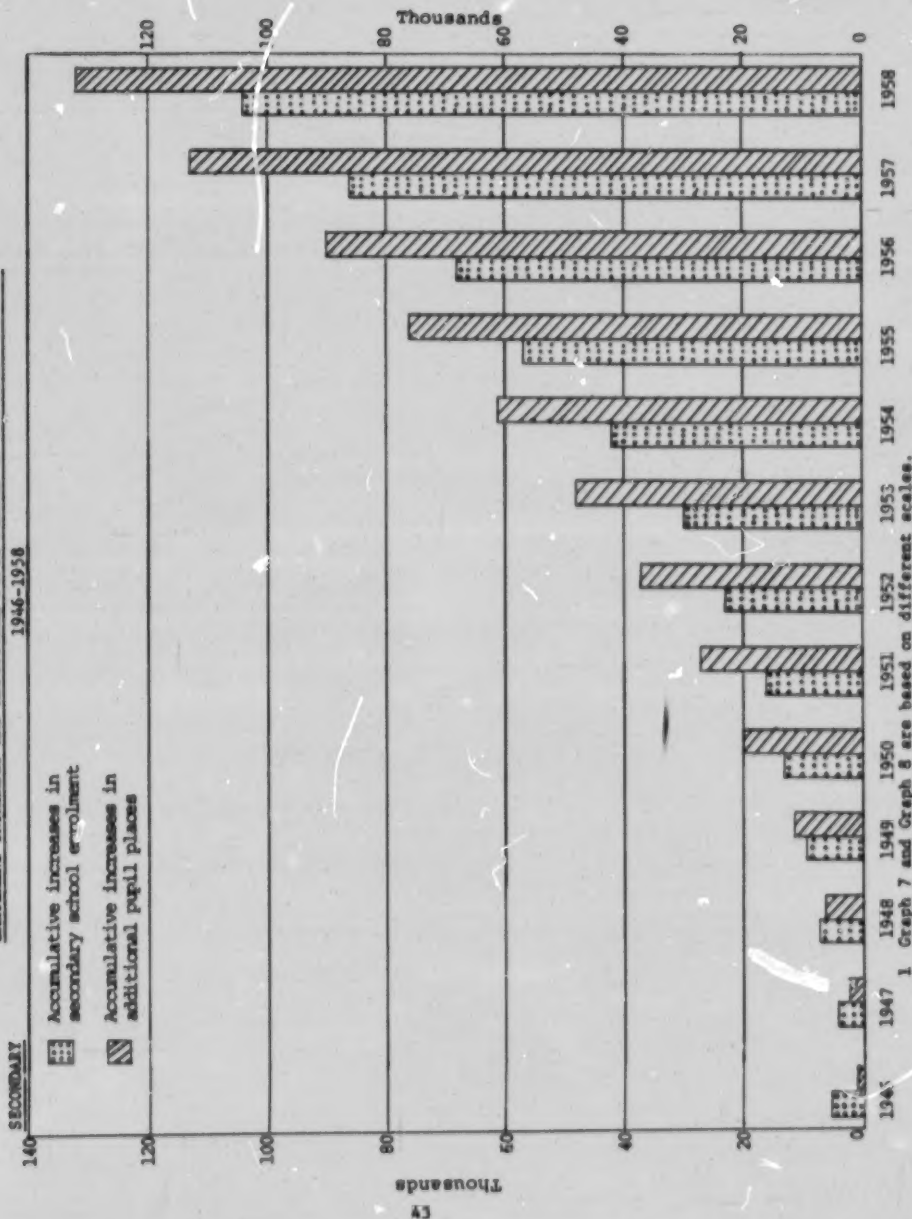
Year	Increased Enrolment	Number of Building Projects	Pupil Places: New and Replacement	Estimated Cost \$
1946		9	670	303,000
1947	-761 ⁴	19	1,490	539,000
1948	2,149 ⁴	27	4,240	4,470,000
1949	2,016 ⁴	19	4,810	7,577,000
1950	3,965 ⁴	29	8,850	13,142,000
1951	2,341	29	7,020	8,631,000
1952	7,535	31	10,240	14,240,000
1953	6,458	43	10,750	16,891,000
1954	12,617	58	13,880	17,689,000
1955	14,396	56	14,750	20,217,000
1956	11,043	46	14,080	17,285,000
1957	17,920	66	22,890	29,209,000
1958	18,550	58	18,750	26,081,000
1959	15,501	71	18,510	25,193,000
1960	25,199	72	26,480	39,169,000
1961	36,402	62	19,520	31,941,000
1962	32,401	105	36,730	82,114,000
1963	32,632	174	66,650	181,611,000
1964	31,091	46	17,430	40,023,000
1965	23,437	69	16,972	59,581,000
1966	17,288	116	55,975	150,093,000
1967	27,710	108	40,750	133,540,000
1968	37,071	56	28,457	101,950,000
1969	29,872	56	26,472	93,451,000
1970	26,234	65	35,329	117,336,000
1971	17,607	81	28,785	128,231,000
Total	450,674	1,571	550,480	\$1,360,507,000

- Notes:
1. Enrolment increases are based on September enrolments.
 2. Building projects are counted in the year of completion.
 3. No account is taken in this table of pupil-places lost as a result of the following factors: shift from urban to suburban areas, fire losses, replacement of temporary and obsolete accommodation, and abandonment of small buildings.
 4. Enrolment increases are from enrolment Tables instead of construction Tables.

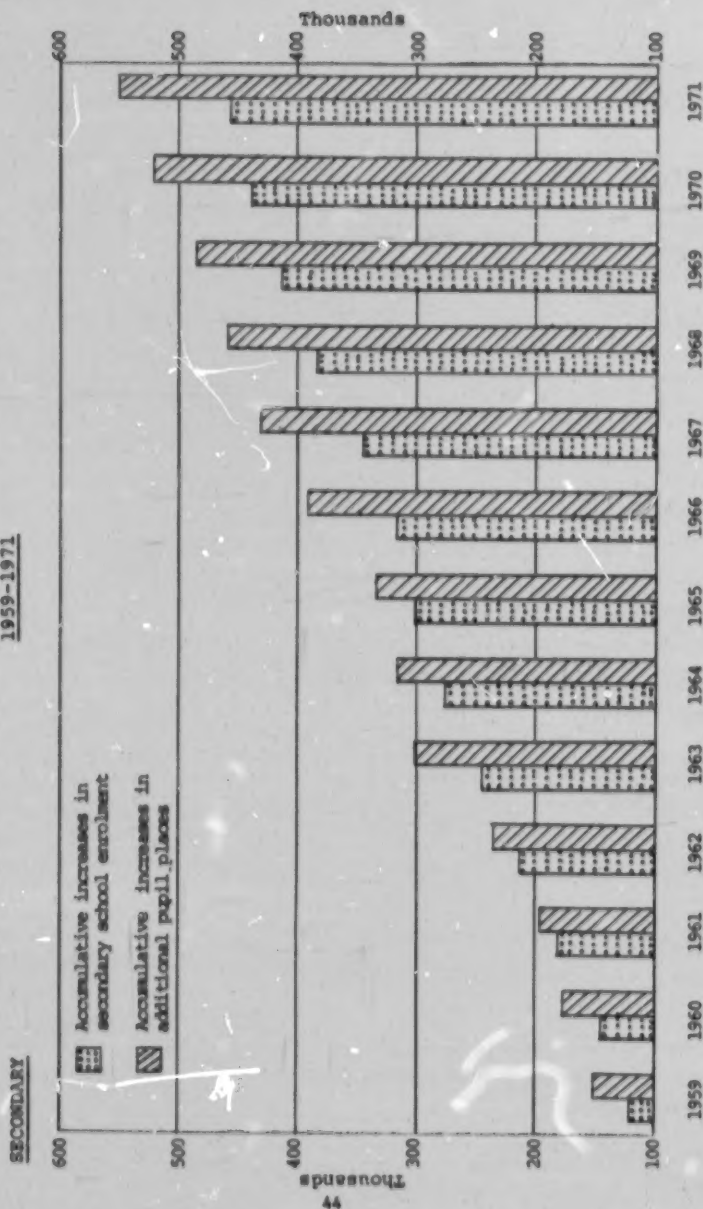
¹ Reports of the Minister of Education, 1946-1971

GRAPH 7

ENROLMENT INCREASES AND ADDITIONAL PUPIL PLACES IN SECONDARY SCHOOLS
1946-1958



GRAPH 8
ENROLMENT INCREASES AND ADDITIONAL PUPIL PLACES IN SECONDARY SCHOOLS
1959-1971



1. Graph 7 and Graph 8 are based on different scales.

CHAPTER 4

UTILIZATION OF ACCOMMODATION

Because of the trends towards lower enrolment for the balance of this decade and because of the magnitude of the building program during the last twenty-five years, it was considered essential that some assessment be made of the adequacy of the amount of accommodation available at the present time. The results of this study should then be helpful in a determination of the need for additional space for the period to 1980.

Method to Determine Rate of Utilization

At the present time, the Ministry of Education provides a formula¹ for "pupil loadings" to be applied to the types of classroom accommodation designed to serve the variety of subjects offered in the schools. For example, a standard elementary school classroom is assumed to have a "pupil loading" of 35, a science laboratory of 30, and a vocational shop of 20. These figures are sometimes referred to as the "rated capacity". The complete formula is presented in Appendix A.

In recent years it has become practice to permit a discretionary allowance of ten per cent in the application of the rated capacity. Boards and the Ministry of Education have, therefore, unofficially recognized another designation, "effective capacity", which is rated capacity less ten per cent. For example, a standard elementary school classroom would have a rated capacity of 35 and an effective capacity of 31.5, or a secondary school machine shop would have a rated capacity of 20 and an effective capacity of 18. Similar adjustments from rated capacity to effective capacity are recognized for the many other types of accommodation listed in Appendix A.

There are a number of reasons for the use of effective capacity rather than rated capacity in the calculation of utilization of existing accommodation. While there is little research evidence to support the conclusion that smaller classes create a better learning situation, there is a belief held by most teachers and the general public that smaller classes are desirable. In any

¹Capital Grant Plan, Ontario Department of Education, Toronto, 1971, pp.803-804.

case, there has been a trend towards smaller classes during recent years. Specialized instruction in, for example, remedial classes, classes for the disadvantaged, and classes for the handicapped, has reduced the average enrolment of classes within a school system. At the secondary level, the increase in the number of shops with a limited number of students in each, the broader spectrum of course offerings, the reduction in class enrolment during the year, and the limited number of students in some of the smaller schools are examples of conditions which tend to reduce the number of students per classroom. The factor of ten per cent, while having no statistical or other proven validity in itself, has been found to be a practical recognition of existing circumstances relating to school accommodation. For these reasons, effective capacity has been used in the calculations in this study to determine the rate of utilization.

In general, the procedure adopted to determine the percentage rate of utilization is to (a) take the number of students enrolled, (b) allocate students by programs to classrooms on the basis of effective capacity of each classroom, (c) arrive at the number of required classrooms, (d) divide the result by the number of available classrooms and (3) multiply by one hundred to secure the percentage rate of utilization. Some additional calculations have had to be made to allow for the particular circumstances in each of the elementary and secondary school levels.

The data provided in the Principal's September Report 1970¹, submitted to the Department of Education by each school in the Province, were used in the calculations to determine the percentage utilization of classroom space for each school board. This Report was the latest available at the time the study was begun. The numbers of available classrooms were included in each Report. Effective capacity was used to determine the number of required classrooms to meet the needs of a particular school board.

Elementary Schools - Utilization of Accommodation, 1970

The calculations of the percentage utilization of effective permanent accommodation has been made for each elementary school board. In addition, the number of portable or temporary classrooms has been determined and the

¹Principal's September Report 1970, Department of Education, Toronto, 1970.

percentage utilization of the total effective accommodation has also been calculated. The results for school boards in Region 1, centered at Thunder Bay, are presented in Table 7. Similar tables for all ten Regions are provided in Appendix B. The boundaries of the Regions are outlined in Figure 1.

Where schools do not have resource centres or libraries, classrooms have been allocated for this purpose on the basis of the equivalent of one classroom for schools having eight to twelve classrooms inclusive or the equivalent of two classrooms for schools having thirteen or more classrooms. It was considered that other specialized activities or groups of students could be accommodated within the allocated space.

The rate of utilization of permanent effective classroom space for all boards in the Province varies from a low of 44 per cent to a high of 200 per cent. The extremes are found in areas of very low population where relatively small enrolment changes cause severe distortion of utilization rates. Both the median and the average utilization rates for boards in Regions 1, 2, and 3 are 96 per cent although wide variations exist. In the more densely populated areas in Regions 4 to 10 inclusive, the median for all boards is 95 per cent while the average is 95.4 per cent. In these latter Regions, the average rate of utilization for Public Schools under boards of education is 95.6 per cent while the average for Separate Schools is 93.4 per cent. Inclusion of portable classrooms to augment the total facilities available results in the average utilization rate being lowered by less than two per cent. These figures indicate that at September 30, 1970, most boards had achieved an extremely high rate of utilization.

TABLE 7

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS

REGION 1 - THUNDER BAY

September 30, 1970

ELEMENTARY

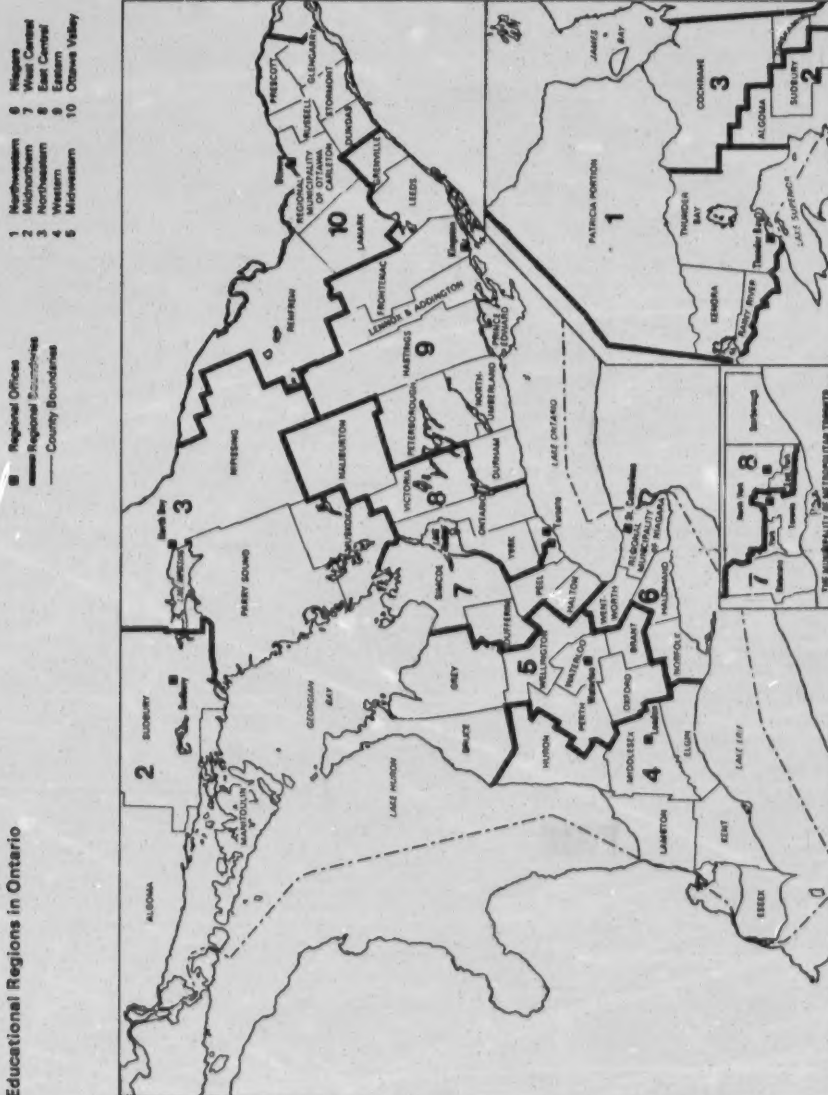
Board No. ¹	Required Classrooms ²	Available Classrooms ³	Percentage Utilization of Classrooms ⁴	Available Portables	Percentage Utilization of Classrooms and Portables Combined
137	3	6	50		50
8	127	123	103	4	100
16	99	97	102	2	100
144	1	-	-		-
29	100	101	99	1	98
59	45	42	107		107
161	1	1	100		100
163	2	3	67		67
164	1	1	100		100
1	39	42	93		93
153	1	1	100		100
128	1	1	100		100
129	6	6	100		100
131	3	2	150		150
136	4	4	100		100
139	1	2	50		50
18	24	25	96		96
145	2	2	100		100
146	2	2	100		100
147	3	4	75		75
33	48	57	84		84
32	510	575	89	5	88
156	4	5	80		80
45	26	33	79	1	76
160	2	2	100		100
162	2	3	67		67
82	18	20	90		90
95	40	43	93		93
175	5	7	71		71
167	13	4	-		-
86	25	32	78		78
88	33	24	138	3	122
98	220	196	112	2	111
171	13	13	100		100
173	1	2	50		50
105	19	20	95		95
115	20	18	111		111

- Notes: 1. For identification purposes, a number has been assigned to each school board in the study.
2. Estimated number of classrooms needed to meet board requirements on September 30, 1970.
3. Data taken from Department of Education Statistical Unit Records based on PRINCIPAL'S SEPTEMBER REPORT, 1970.
4. Calculation is made as follows:

$$\text{Required Classrooms} \div \text{Available Classrooms} \times 100 = \text{Percentage Utilization of Classrooms}$$

Educational Regions in Ontario

Figure 1¹



¹Reproduced from DIRECTORY OF SCHOOLS 1972/73, Ministry of Education, Ontario, 1972, pp.8-9.

Elementary Schools - Utilization of Existing Accommodation, 1971-1980

In most school board jurisdictions it will be difficult or almost impossible, because of declining enrolments, to maintain the high rate of utilization experienced in 1970. If it were assumed that no further building of additional pupil places were to be undertaken by boards in the period from 1970 to 1981, and if all existing accommodation were to remain in use as at present, the utilization rate of the permanent elementary school facilities within almost all board jurisdictions would drop sharply by 1980. The data for Southern Ontario are presented in Table 8. The following summary shows the percentage rate and the number of areas at each level of utilization in 1980:

<u>1980</u>	
<u>Percentage Rate of Utilization</u>	<u>Number of Counties or Regions</u>
Below 60	2
From 60 to 70	2
From 70 to 80	10
From 80 to 90	19
From 90 to 100	5
Above 100	1

On the basis of our assumptions and calculations, there will be a considerable over-supply of permanent elementary school accommodation for most boards throughout the decade of the 1970's.

Elementary Schools - Projections of Building Needs by Boards, 1970

In 1969, the Department of Education asked each school board to submit annually a five-year forecast of the capital expenditure necessary to meet accommodation needs. Subsequently, a multi-year capital projection covering a ten-year period was required. The latest figures available at the time that work on this Report began were for the year 1970.

It was considered by the Committee that some study should be given to the relationships that existed among the amount of permanent effective accommodation available in 1970, the enrolment projections by county and district for the

TABLE 8

PERCENTAGE UTILIZATION OF TOTAL PERMANENT ELEMENTARY SCHOOL ACCOMMODATION
AVAILABLE IN SELECTED JURISDICTIONS ON SEPTEMBER 30, 1970, BASED ON PROJECTED ENROLMENTS TO 1981^{1,2}

ELEMENTARY

County/Region	Percentage Utilization of Classrooms											
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
Brant	96	Not avail-	93	92	91	89	88	86	83	81	81	81
Dufferin	110	avail-	113	110	108	106	102	98	94	92	91	92
Elgin	97	able	95	93	92	90	88	87	85	84	84	85
Essex (excluding Windsor)	98		101	99	97	96	93	90	86	84	82	82
Frontenac	88		86	86	86	84	83	81	79	79	79	79
Grey and Bruce	101		98	96	94	91	89	86	82	80	80	81
Haliburton	107		105	102	99	97	94	92	89	87	87	89
Malheur	95		92	89	87	84	80	75	70	72	72	74
Salton	97		97	95	94	93	91	90	88	87	87	89
Hastings	103		98	95	92	89	86	83	81	80	79	80
Huron	101		97	93	90	87	83	79	76	75	74	75
Kent	101		97	95	93	90	88	86	83	83	83	84
Lambton	93		88	85	83	81	79	77	75	75	76	76
Leamington	95		91	90	87	86	84	82	81	80	82	83
Leeds and Grenville	100		99	97	95	93	92	91	89	88	88	88
Lennox and Addington	110		111	109	106	104	102	98	94	92	92	93
Lincoln	93		90	89	88	87	85	84	82	82	82	82
Metropolitan Toronto	100		101	102	103	103	103	103	103	102	101	101
Middlesex (including London)	93		91	91	90	90	88	87	85	85	85	85
Norfolk	101		97	95	93	91	89	86	84	83	83	84
Northumberland and Durham	100		96	93	90	88	85	82	79	78	78	80
Ottawa-Carleton	99		100	99	98	96	94	92	90	89	89	89
Oxford	86		84	85	86	86	85	84	84	83	83	83
Peel	100		96	93	91	89	86	83	81	80	80	80
Peterborough	95		100	101	101	100	98	96	93	91	90	91
Prescott and Russell	94		93	92	89	87	84	82	79	78	76	77
Prince Edward	84		93	91	89	87	86	84	82	82	82	83
Simcoe	88		95	92	90	88	84	81	77	73	70	69
St. Catharines	86		83	80	76	73	70	66	62	60	59	58
St. Lawrence	100		80	75	71	67	64	61	58	57	57	58
St. Thomas	100		97	95	93	91	88	85	83	82	83	84
St. Thomas, Dundas and Glengarry	91		85	82	79	75	73	70	67	66	65	65
Victoria	108		106	105	103	101	98	95	93	92	92	94
Waterloo	101		101	101	100	99	97	96	94	93	92	92
Welland	91		88	86	85	84	82	81	79	79	79	80
Wellington	103		101	99	97	95	93	90	87	86	86	86
Wentworth (including Hamilton)	93		91	90	89	88	87	86	85	85	85	85
Windsor	93		88	85	83	81	79	78	77	77	77	77
York (excluding Metropolitan Toronto)	99		99	98	95	92	88	84	80	77	74	71

Note: 1 For purposes of the calculations in this Table, it is assumed that Available Classrooms and the Effective Classroom Space are constant as for September 30, 1970, while number of pupils is declining in most jurisdictions.

2 Available accommodation for all boards within the geographic area have been combined as have projected enrolments.

period to 1981, and the forecasts by boards of expenditures for capital purposes to provide accommodation to meet the enrolment projections of boards to 1981. For this purpose twelve counties were chosen for analysis. They are representative of both rural and urban areas, school systems of varying size in terms of enrolment and geographic area served, and with Public School boards and Separate School boards having common outer boundaries. Table 9 presents the data.

It will be seen that within County A there are two boards, one administering Public Schools and the other responsible for Separate Schools. In this county the total enrolment is expected to decline by 2,766 pupils by 1980, while boards, on the basis of their forecasts in 1970, were planning to provide an additional 3,860 pupil places.

In the second example in Table 9, there are three boards involved because there is a board of education administering the Public Schools for each of the two counties while one board is responsible for all Separate Schools in the two counties. The results are even more startling in that the enrolment is expected to decrease by 4,757 pupils by 1980, while the boards were planning to provide 7,161 new pupil places by that date.

Cumulatively, the projections indicate that the enrolments for these counties will have declined by 13,837 pupils in 1975 and by 38,813 pupils in 1980. The building forecasts, however, indicated that the twenty-one boards were in the process of planning an estimated 87,229 new elementary pupil places by 1975 and 155,763 by 1980. A comparison of the enrolment figures and the total of the existing and contemplated new pupil places converted to effective accommodation units, including the estimated space shown on building forecasts submitted by boards in 1970, are shown in Graph 9.

There are a number of factors which must be taken into account in any interpretation of the statistics relating to the twelve counties and the twenty-one boards involved in our analysis. The first forecast of capital expenditures to 1975 was for most boards a projection of expenditures in previous years. The inclination was to provide for all possible eventualities with the knowledge that, at the time of a subsequent forecast, the necessary amendments could be made in the

TABLE 9

COMPARISON OF ENROLLMENT PROJECTIONS WITH SCHOOL BOARD
BUILDING FORECASTS, SEPTEMBER, 1970, FOR SELECTED COUNTIES, 1970, 1975, AND 1980

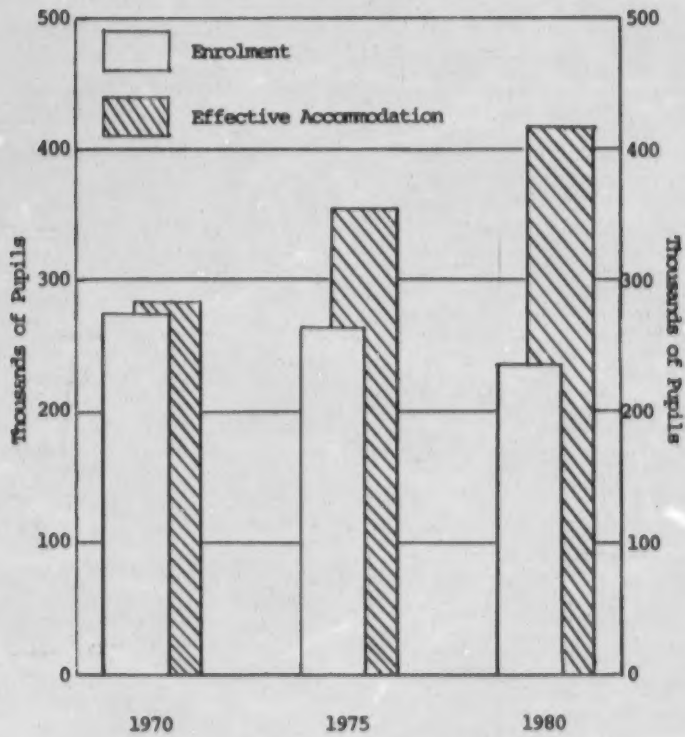
ELEMENTARY

Board No.	County(-ies) Involved	County(-ies) Actual Enrollment Sept. 1970	County(-ies) Forecast Enrollment Sept. 1975	County(-ies) Forecast Enrollment Sept. 1980	County(-ies) Forecast Enrollment Change from 1970 to Sept. 1975	County(-ies) Forecast Enrollment Change from 1970 to Sept. 1980	Board Forecast of Additional Pupil Places to be provided by Sept. 1975	Sept. 1980
2	A	17,048	15,863	14,282	-1,185	-2,766	1,470	2,620
78	A						955	1,260
Total							2,425	3,860
3	B						1,394	1,784
19	C	21,325	19,100	16,568	-2,225	-4,757	4,100	4,712
79	B,C						665	665
Total							6,159	7,161
53	D	15,293	13,507	12,079	-1,786	-3,214	1,195	1,807
110	D						1,807	3,086
Total							3,002	4,893
55	E						2,677	3,289
27	H	22,558	19,500	16,823	-3,058	-5,735	719	719
93	E,H						1,320	1,320
Total							4,716	5,328
70	F	47,563	46,183	43,025	-1,380	-4,538	8,459	17,945
121	F						3,924	5,160
Total							12,383	23,105
71	G	20,806	19,246	17,234	1,560	-3,572	3,713	5,549
123	G						1,412	2,800
Total							5,125	8,349
9	I						840	1,180
54	K	58,204	60,923	54,399	+2,719	-3,805	25,861	56,461
83	I,K						8,886	18,066
Total							35,587	75,707
22	J	40,467	38,618	36,276	-1,849	-4,191	5,206	8,863
90	J						1,154	3,908
Total							6,260	12,771
63	L	34,288	30,775	28,053	-3,513	-6,235	9,958	10,928
116	L						2,514	3,661
Total							11,472	14,589
TOTAL		277,552	263,715	238,739	-13,837	-38,813	87,229	155,763

GRAPH 9

COMPARISON OF ENROLMENT PROJECTIONS WITH SCHOOL BOARD
BUILDING FORECASTS, SEPTEMBER, 1970
FOR SELECTED COUNTIES
1970, 1975, AND 1980

ELEMENTARY



light of new pressures which might be brought to bear and on the basis that it was easier to reduce the estimate than to add to it. Enrolment forecasting on a Provincial basis with any degree of sophistication had not been attempted in Ontario until recent years. Prior to this, it was necessary to begin the process with limited data. The problem was compounded when an attempt was made to break the figures down for an individual school board jurisdiction. Because of the tremendous increase in enrolment, boards, with a few notable exceptions, had not relied on detailed examination of future accommodation needs, since they could hardly build rapidly enough to meet the current demand for pupil places. Boards had not, therefore, had much experience in the assembly and analysis of information, data and procedures necessary to make reliable forecasts for their jurisdictions.

In any case, until the larger units became operative in 1979, it was practically impossible, because of overlapping geographic boundaries among Public School boards, Separate School boards, Secondary School boards, municipalities, and the units for which statistics were compiled, to determine with any substantial degree of confidence the probable enrolments for most school boards a few years ahead. Soon after their establishment, some of the new units did reassess the composite building programs of their predecessors and revised the projected building programs downward as a result of planning on a broader geographic base. The result was a substantial reduction in spending for capital purposes from that contemplated by the former boards.

Elementary Schools - Assessment of Total Need by Geographic Area

The studies of utilization reported above were based on total enrolment and total accommodation within a geographic area or areas served by both Public School boards and Separate School boards. While it might be argued that the needs of the two types of boards in each geographic area ought to be developed separately and considered in isolation, this approach is neither realistic nor justifiable at a time of overall declining enrolments. A significant factor in support of this conclusion is that there are Roman Catholic parents whose children attend Public Schools and who are themselves Public School ratepayers. Any projection of enrolment by a Public School board will include these children. At the same time, there is no assurance that these parents will continue to be Public School ratepayers. They may, given a change in circumstances, switch

their support to the Separate Schools. Indeed, the Separate School boards may be anticipating such a transfer in making projections of their accommodation needs. As a result, the same children may well be counted by both boards.

An example which illustrates the situation occurred quite recently in the Finch Avenue West and Jane Street area of North York. The North York Board of Education in anticipation of the need for additional accommodation as a result of subdivision development approved in 1970 the construction of the new Firgrove Public School on an eight-acre site. The school with a capacity of 600 pupil places opened in September, 1971, with an enrolment of 118 pupils. In 1971, the Metropolitan Separate School Board provided a portable school on a three-acre site across the road from the Firgrove Public School. It was named the St. Francis de Sales Separate School, had a capacity of 316 pupil places, and opened in September, 1971, with an enrolment of about 443 pupils. Consequently, Firgrove Public School was operating at about 20 per cent of capacity while the St. Francis de Sales Separate School was at 140 per cent capacity.

In the light of its heavy enrolment and the fact that children were in portable classrooms, the Metropolitan Separate School Board made application for construction of a permanent building on the St. Francis de Sales site at an estimated cost of \$1,000,000, with a designed capacity of 526 pupil places. If this project had proceeded, the area would have been served by two schools, each worth about \$1,000,000, but with the Firgrove Public School operating considerably below capacity. Fortunately, the two boards were able to work together to avoid the wastage of space and money.

It is worth noting at this point that many Public School boards and most Separate School boards make some provision for checking the local assessment of Roman Catholics with a view to having them remain as Public School ratepayers or to encourage them to become Separate School supporters respectively. The possibility of transfer of assessment from one board to the other is very real with a resulting impact of considerable significance on the accommodation needs as projected by each board independently.

The Committee came to the conclusion that it was imperative that the need for elementary school accommodation in any specific area must be based on the total enrolment, even though the accommodation would be made available, in part, by

each of the two boards where more than one board existed.

It should be made clear that the assessment of accommodation need on the basis of total enrolment in a particular area is not designed to interfere with the legitimate requirements of each board. It does, however, make it imperative that there be no duplication of facilities and that only essential accommodation is provided by each board. It will be necessary for the boards in the same geographic area to co-operate to achieve this goal. That co-operation may result in the sale of a school building and site by one board to the other, it may involve the rental of space by one board from the other, it may mean the provision of additional accommodation by one board on a site which it owns to meet the requirements of itself and the other board with the necessary financial adjustments, it may involve the joint use of facilities such as gymnasias, general purpose rooms, outdoor educational facilities and playgrounds. The nature of the co-operation will vary from one jurisdiction to another since the circumstances and possibilities will undoubtedly be unique to a particular area. Naturally, the opportunities for co-operative efforts will be greater in areas of high population density and particularly where new housing developments are taking place. But the possibilities for co-operation in other areas because of changes in the numbers of Public School ratepayers and Separate School supporters, the decline in enrolments, the abandonment of obsolete accommodation, and the consolidation into larger units should be fully explored and considered before any commitment for additional new accommodation is made.

When the total need for accommodation for a geographic area is determined on the basis of total enrolment, housing development, and the other applicable factors, neither a Public School board nor a Separate School board should be required to enter into any arrangement which makes impossible the attainment of the educational goals or aims and objectives of a particular board. For example, if in a geographic area there is an existing eight-room Public School with two empty classrooms and if there are fifty children of Separate School supporters for whom the Separate School board requires accommodation, the two boards ought to give every possible consideration to a resolution of the problem without the construction and capital indebtedness for two additional classrooms. But it may be unacceptable to utilize the eight classrooms in the Public School by dispersing the children of the Separate School supporters throughout the eight classrooms. If that were done, it could be impossible to provide the emphasis which the

Separate Schools wish to provide for their pupils.

It might, however, be quite feasible to organize two classes for the Roman Catholic pupils with their own teachers under the supervision and direction of the staff of the Separate School board and to utilize the two vacant classrooms in the Public School. Obviously, there will be a number of other matters of joint utilization of the building which would have to be considered. The solutions to any problems which might be anticipated or which might arise later will have to be worked out by the boards, their officials, and the teaching staffs.

The principle that a board ought not to be required to enter into any arrangement for utilization of accommodation which makes impossible the attainment of the educational goals or aims and objectives is sound. It ought to be applied with reasonableness, wisdom, and justice and not in a manner designed to secure advantage to a particular board or group. If the projected need for accommodation is based on the total requirements for a geographic area, if the Public School board and the Separate School board co-operate in the determination of the need, if the Ministry of Education approves the provision of new accommodation by each board which in total is closely related to the overall assessment of need, then all the taxpayers will be assured that their financial interests are being protected while the requirements for educational facilities are being met in a reasonable manner.

Elementary Schools - Limitations on Full Utilization of Facilities

It is obvious that the ultimate in efficient use of accommodation would be achieved if the total enrolment in a geographic area were matched by a corresponding number of pupil places. We have seen that some adjustment from this ideal may have to be made to accommodate the respective goals and aims and objectives of a Public School board and a Separate School board in a particular situation. But there are other considerations which reduce the possibility of full utilization. Among these are the following:

(a) Unused accommodation may be located in one community included in the jurisdiction of a board while the need for facilities exists in another community so remote geographically that provision of transportation is not a practical possibility;

(b) Excess accommodation may exist in several schools scattered over a considerable area whereas the need may be concentrated in a specific location, for example, in a new housing development, making the transportation of pupils either impractical or more costly than the provision of permanent accommodation on a new site in or near the housing development;

(c) There may be a need for accommodation of a specialized nature for resource centres, gymnasias, outdoor education, home economics or industrial arts to serve the same pupils on a part-time basis in addition to the regular classroom accommodation provided for them. This will be particularly true when pupils have to be transported to a central location for these purposes.

(d) In a period of declining enrolments, it is inevitable that there will be an increase in the amount of unused accommodation.

Secondary Schools - Utilization of Accommodation, 1970

Table 10 presents the percentage utilization rate of effective permanent accommodation available to secondary school boards on September 30, 1970. The median rate for all boards was 96 per cent and the average rate 98 per cent, indicating, as at the elementary level, a high degree of efficiency of use for the Province as a whole. Not surprisingly, there are a few jurisdictions where overcrowding exists and a few others where an excess of accommodation can be found. But the number of these examples is small and, in most cases, can be explained by a rapid increase in enrolment in some areas or by decreases because of population shifts or other circumstances peculiar to a specific jurisdiction.

A study of the rate of utilization of technical shops, for example, has revealed great variations among school systems. The data are presented in Table 11. The rate in the right column has been calculated by dividing the number of "student-hours" during which the shops were in use, as reported by the schools, by the number of "student-hours" available for full utilization if this had been required. For purposes of this study, it was assumed that each shop in a school system can provide 16,200 student-hours during the school year. This assumption is based on an average of eighteen students using each shop for five hours per day, five days per week, for thirty-six weeks of the year. On this basis, the average shop utilization rate for all boards having more than ten technical shops

TABLE 10
PERCENTAGE UTILIZATION OF EFFECTIVE ACCOMMODATION IN SECONDARY SCHOOLS
September 30, 1970

<u>Board No.</u> ¹	<u>Rated Accommodation</u> ²	<u>Effective Accommodation</u> ³	<u>Enrolment Sept. 30, 1970</u>	<u>Percentage Utilization of Effective Accommodation</u> ⁴
8	2,300	2,070	1,574	76
29	1,970	1,773	1,683	95
59	530	477	424	89
1	650	585	646	110
16	1,780	1,602	1,707	107
18	700	630	674	107
33	1,420	1,278	977	76
32	11,470	10,323	9,963	97
45	760	684	531	78
5	540	486	413	85
26	150	135	95	70
41	500	450	561	125
48	2,150	1,935	1,606	83
61	7,060	6,354	6,572	103
40	930	837	805	96
6	370	333	387	116
13	1,470	1,323	1,207	91
65	16,820	15,138	13,983	92
7	930	837	1,734	207
25	820	738	806	109
28	2,350	2,115	1,994	94
67	3,730	3,357	3,647	109
3	2,330	2,097	2,433	116
46	7,610	6,849	7,144	104
10	1,210	1,089	1,225	113
73	1,300	1,170	1,234	106
31	1,870	1,683	1,908	113
66	3,010	2,709	2,652	98
12	5,500	4,950	4,396	89
14	9,150	8,235	7,454	91
74	15,840	14,256	13,164	92
27	5,780	5,202	4,656	90
30	9,840	8,856	8,496	96
34	9,880	8,892	8,931	100
39	21,140	19,026	16,238	85
42	3,800	3,420	3,811	111
2	6,500	5,850	6,724	115
3	3,910	3,519	3,383	96
19	6,500	5,850	5,376	92
53	6,350	5,715	6,285	110

TABLE 10 (Continued)

Board No. ¹	Rated Accommodation ²	Effective Accommodation ³	Enrolment Sept. 30, 1970	Percentage Utilization of Effective Accommodation ⁴
55	5,640	5,076	5,208	103
70	19,070	17,163	16,460	96
71	10,120	9,108	7,995	88
47	4,400	3,960	4,103	104
20	3,680	3,312	3,014	91
38	13,850	12,465	11,984	96
44	17,750	15,975	14,903	93
23	26,010	23,409	19,725	84
72	9,020	8,118	7,009	86
9	2,230	2,007	1,778	89
22	18,560	16,704	15,495	93
54	22,490	20,241	18,060	89
181	800	720	618	86
63	14,450	13,005	13,712	105
15	21,930	19,737	21,071	107
68	38,530	34,677	36,049	104
75	8,470	7,623	7,863	103
21	710	639	591	93
51	16,550	14,895	14,361	96
69	2,600	2,340	2,790	119
76	17,150	15,435	13,581	88
11	5,970	5,211	3,811	73
50	46,570	41,913	32,487	78
62	27,000	24,300	26,024	107
17	8,740	7,866	7,779	99
24	8,810	7,929	8,529	108
36	6,800	6,120	6,004	98
37	3,050	2,745	2,379	87
49	9,200	8,280	7,399	89
56	7,300	6,570	7,388	89
58	1,600	1,440	1,420	99
35	4,290	3,861	3,529	91
57	3,970	3,573	3,931	110
4	12,610	11,349	9,228	81
52	33,980	30,582	23,467	83
202	660	594	693	117
60	8,590	7,731	8,133	105
64	9,750	8,775	8,843	101
TOTALS	653,820	588,276	556,913	95

- Notes: 1. For identification purposes, a number has been assigned to each school board.
2. "Rated Accommodation" is calculated on the formula in the CAPITAL GRANT PLAN 1971, issued by the Ontario Department of Education.
3. "Effective Accommodation" is calculated by reducing the "Rated Accommodation" by ten per cent.
4. Calculation is made as follows:

$$\frac{\text{Effective Accommodation} \div \text{Enrolment} \times 100}{\text{Percentage Utilization of Effective Accommodation.}}$$

TABLE 11

PERCENTAGE UTILIZATION OF TECHNICAL SHOP ACCOMMODATION IN SECONDARY SCHOOLS

September 30, 1970

Board No.	Shop Student-Hours Available	Shop Student-Hours Utilized	Percentage Utilization
8	210,600	140,280	67
29	243,000	187,248	77
59	64,800	34,408	53
1	64,800	45,393	70
16	178,200	193,257	108
18	81,000	70,982	88
33	97,200	48,786	50
32	1,247,400	1,016,350	81
45	129,600	64,907	50
41	64,800	56,737	88
48	259,200	165,340	64
61	874,870	503,222	58
40	113,400	61,690	54
6	32,400	11,575	36
13	48,600	194,184	400
65	2,089,800	1,575,324	75
7	178,200	123,560	69
25	129,600	86,244	67
28	324,000	199,537	62
67	405,000	311,593	77
43	113,400	260,429	230
46	955,800	637,033	67
10	194,400	206,920	106
73	178,200	160,290	90
31	226,800	242,916	107
66	275,400	306,331	111
12	810,000	402,902	50
14	1,247,200	801,725	64
74	1,603,800	1,269,505	79
27	761,400	543,634	71
30	1,328,400	924,571	70
34	1,328,400	1,039,099	78
39	2,673,000	1,600,422	60
42	486,000	320,832	66
2	810,000	570,467	70
3	388,800	385,147	99
19	826,200	596,557	72
53	988,200	742,196	75
55	712,800	467,576	66
70	2,413,800	2,260,379	94
71	1,134,000	737,655	65
47	664,200	397,388	60
20	550,800	338,138	61
38	2,300,400	1,279,083	56

TABLE 11 (Continued)

Board No.	Shop Student-Hours Available	Shop Student-Hours Utilized	Percentage Utilization
44	2,106,000	1,498,257	71
23	3,304,800	3,060,123	93
72	1,036,800	835,602	81
9	356,400	187,849	53
22	1,846,800	1,018,137	55
54	2,656,800	1,431,054	54
181	64,800	35,604	55
63	1,960,200	1,241,147	63
15	1,992,600	1,595,478	80
68	4,050,000	2,923,225	72
75	680,400	453,078	67
21	113,400	67,701	60
51	2,008,800	1,068,573	53
69	356,400	176,364	49
76	2,025,000	1,965,050	97
11	243,000	181,525	75
50	3,191,400	1,689,100	53
62	2,835,000	2,424,436	86
17	1,344,600	891,434	66
24	1,279,800	1,050,970	82
36	842,400	423,802	50
37	437,400	284,812	65
49	1,198,800	627,254	52
56	1,020,600	679,733	67
58	291,600	173,690	60
35	550,800	261,234	47
57	388,800	115,868	30
4	1,312,200	707,061	54
52	2,446,200	1,041,559	43
202	48,600	23,760	49
60	1,328,400	1,000,136	75
64	1,506,600	728,616	48
TOTALS	74,633,200	51,444,046	69

Notes: 1. For identification purposes, a number has been assigned to each school board.

2. Calculation is made as follows:

$$\frac{\text{Shop Student-Hours Utilized}}{\text{Shop Student-Hours Available}} \times 100 = \text{Percentage Utilization of Shop Accommodation}$$

in their school systems is 69.9 per cent while the median is 66.5 per cent.

There are several reasons given to explain rates of utilization of shop areas which seldom approach 100 per cent. In many schools the total enrolment may not be large enough to permit a full complement of classes at maximum capacity. As a result, the enrolment per shop per period may be reduced to an average which will permit the facilities to be used for the full number of periods. Or the enrolment may be maintained at a high level per period while less than a full complement of periods is scheduled. Or there may be a combination of these patterns. Some programs such as those designated previously as "occupational" or "junior vocational" courses justify smaller classes than the maximum used in the calculation above. Some technical areas staffed by highly specialized teachers often are not in use when the teachers have preparation or supervision or spare periods. Small classes, particularly at senior levels, are not uncommon due to the high drop-out rate from special courses in some advanced programs. In spite of these problems, some school systems are considerably more successful than others in their utilization of shop facilities. In the past, standard classrooms and the programs conducted in them have often been heavily loaded, while more specialized areas and courses received favoured treatment in school organization because of the difficulties involved in the scheduling of space. Principals and teachers must be encouraged to find new ways to use these specialized areas so that other subject areas will not be overloaded as a result of efforts to achieve an average utilization rate at a high level for the school.

Secondary Schools - Utilization of Existing Accommodation, 1971-1981

Using the projected enrolments by county and district to 1981 and relating these to the effective accommodation for the same jurisdictions at September, 1970, the utilization rates to 1981 are as presented in Table 12. Most areas will experience an increased demand for space until peak enrolments are reached after 1977. For 45 per cent of the areas, the utilization rate will not exceed 110 per cent of effective capacity at the time of peak enrolment.

TABLE 12 (Cont. Inued)

[illegible]

¹Enrolment projections have been adapted from Watson, Cicely, Quasi, Saeed, and Kiebat. ARBETH, ONTARIO SECONDARY SCHOOL ENROLLMENT PROJECTIONS TO 1981/82, The Ontario Institute for Studies in Education Toronto, 1969.

²For purposes of the calculations in this Table, it is assumed that the Effective Accommodation is constant as for September 30, 1970.

³Comparable data for York County (excluding Metropolitan Toronto) are as follows:

Support of York County Board of Education, Division of Planning and Development,
 Aurora, April 23, 1972.

Projections of Building Needs by Boards, 1971

Reference has already been made to the multi-year forecasts in 1970 of capital programs considered necessary by boards to meet their accommodation needs for this decade. These forecasts showed a continuing trend towards the provision of a large number of pupil places at both the elementary and secondary levels. When evidence about enrolment projections and rates of utilization raised some question about the necessity for the magnitude of the proposed building programs, it was explained that the additional time before the multi-year forecast for 1971 had permitted a more detailed appraisal of future accommodation needs than was possible in the first year of operation of the new boards and that the forecasts submitted in 1971 would be more realistic. An analysis of these later forecasts shows, however, that there was little change, less than a four per cent reduction overall, from the projected requirements prepared for 1970. Some boards did revise their forecasts downwards but a few larger boards made little or no change. A small number of other large boards which were unaffected by the reorganization in 1969 and which had made progress in planning, submitted forecasts indicating a high level of capital spending on a continuing basis throughout the decade.

CHAPTER 5

ACCOMMODATION NEEDS, 1972-1980

The conclusion that emerges from our studies of permanent effective accommodation is that the Province as a whole is in a good position in terms of meeting the needs of its students for school facilities from the standpoints of quantity, quality, and the extent and variety of the programs for which provision has been made. It will still be necessary to provide some accommodation to replace schools which are structurally antiquated, or where maintenance and operating costs are high because of the extreme age of the building. But the number of buildings of this type is relatively small and most are located in the older and larger centres of population. Some new schools will be required in the small number of population growth areas, in locations where new communities are established, or in the few remaining jurisdictions where consolidation of small school units may be desirable if the objectives of higher quality education and greater equality of opportunity are to be realized. Other schools which lack resource centres, general purpose rooms, or areas designed to extend the instructional program may have to be upgraded or updated to meet modern educational and physical standards and requirements, either by small additions to existing facilities or by the conversion of accommodation no longer required because of declining enrolments.

Among the major factors contributing to a continuing demand for some limited building programs over the next few years are the following:

- (a) The development of growth areas around the larger metropolitan centres;
- (b) The designation by the Province of specific geographic areas for development;
- (c) The movement of population from one centre to another in addition to the shifts caused by (a) and (b);
- (d) The changing nature of some communities because of redevelopment, concentration of certain types of housing, tendency of new immigrants to settle in particular areas, etc.;
- (e) The existence of a considerable number of vacant pupil places in locations where it is not practicable to make use of them to meet the need created by an excess of pupils in another geographic area.

The Committee believes that the needs created by the requirements and developments outlined above can be met by the provision of a limited number of additional pupil places.

Elementary Schools

In 1970, the elementary school enrolment was 1,465,488. Our studies have indicated an average utilization rate of about 96 per cent for the approximately 1,526,550 effective pupil places available at that time. The building program in 1971 added about 54,761 effective pupil places so that there were 1,581,311 at the end of the year. To this figure must be added the effective pupil places being provided in 1972.

Because 1970 was the high point in enrolment, the overall percentage rate of utilization will have declined because of the smaller number of pupils enrolled. The projected rates of utilization, as shown in Table 8 (page 51), are based on the available effective pupil places in 1970. Consequently, because additional effective pupil places have been provided since 1970 and because some others will still be provided in the balance of the 1970's, the actual rates of utilization may be still lower than those presented. If rated pupil places, as determined by the Building Approvals Section of the Ministry of Education, were used to calculate the percentage rates of utilization, the latter rates would be still lower. In 1970, there were about 1,696,167 rated pupil places available. The building program in 1971 added 60,846 pupil places for a total of 1,756,653. To the latter figure must be added the rated pupil places being provided in 1972.

Table 5 (page 38) shows that 1,463,251 new rated pupil places were provided from 1946 to the end of 1971. Expressed in effective pupil places, the number is 1,316,926. While the enrolment in 1971 was 1,456,840, it will decline to a projected 1,284,969 in 1980. There were, therefore, enough rated pupil places provided since 1946 to house the total enrolment in 1971, without taking into account the accommodation provided before 1946. The number of 1,316,926 effective pupil places will be sufficient to provide for all students by 1978, again without taking into account any space in existence at the end of 1945. Consequently, if the pupils and accommodation were distributed in a manner to permit maximum advantage to be taken of the number of places, all pupils could

be in relatively new accommodation provided since 1946. Since this ideal distribution does not occur, it is still necessary to use some space more than twenty-five to thirty years old. But the possibility exists that a considerable amount of the oldest and most obsolete accommodation can be abandoned in the next few years without the necessity to replace it. Because of local circumstances, it is recognized that some of the oldest space will have to be replaced, renovated or rehabilitated.

As we have already pointed out, the existing effective pupil places exceeds the projected enrolment by a substantial number. If rated pupil places are used instead of effective pupil places, the gap is even wider. Consequently, except for special circumstances which may occur in a particular situation or jurisdiction, there is little or no justification for the construction of additional pupil places at the elementary school level. Certainly, any proposal for more space should be subject to the most searching review and analysis before any approval is contemplated.

Secondary Schools

The situation at the secondary school level is somewhat different. In 1970, the enrolment was 556,913. The average utilization rate was about 98 per cent for the approximately 568,279 effective pupil places available in that year. The building program in 1971 added about 25,907 effective pupil places so that there were 594,186 at the end of the year. To this figure must be added the effective pupil places being provided in 1972.

If rated pupil places are used in the calculation of the percentage rates of utilization, the latter figures would be lower. In 1970, there were about 631,421 rated pupil places. The addition of 28,785 in 1971 made a total of 660,206 rated pupil places. To the latter figure must be added the number of places being provided in 1972.

Table 6 (page 42) shows that 550,480 new rated pupil places were provided from 1946 to the end of 1971. Expressed in effective pupil places, the number is 495,432. The enrolment in 1971 was 574,520, so that there were enough rated pupil places provided since 1946 to house 96 per cent of the total enrolment in 1971, without taking into account the accommodation provided before 1946. The number of 495,432 effective pupil places was enough to accommodate 86 per

cent of the enrolment in 1971 in relatively new space provided since 1946.

The enrolment projection presented in the first column of Table 4 (page 32) shows a continuing increase in enrolment to a total of 646,041 in September, 1977, followed by a decline through the period to 1981. A similar trend is shown in the projection in the second column of Table 4. It is the view of the Committee that the first column presents maximum possible enrolments. Indeed, if the recent tendency not to continue in school were to persist, it would be most unlikely that the projected enrolments would come close to being realized.

If effective pupil places are used, it will be seen that in total there is more than enough accommodation to meet the needs in 1972. If rated pupil places are used, it is apparent that the existing accommodation is in total sufficient to meet the requirements of the peak enrolment in 1977. Consequently, it seems reasonable to conclude that additional accommodation is in total unnecessary, that the schools can operate within the limit of permanent rated capacity until the peak enrolment is reached in 1977, and that soon thereafter they will be within the limit of permanent effective capacity.

Reference has been made in our utilization studies to the fact that in 45 per cent of the secondary schools, the rate of utilization would not exceed 110 per cent of effective accommodation at the period of peak enrolment. Most of these jurisdictions, possibly with some portables, should be able to manage with few or no additional permanent areas to be constructed. Other boards will require some additional space during the next few years but at present only ten areas exceed utilization of effective accommodation by more than ten per cent.

The amount of shop accommodation and its low rate of utilization in many areas suggest that requirements for this type of facility will be minimal. More creative utilization of existing shop accommodation should reduce the need still further.

General

If capital programs are to be kept within reasonable expenditure levels, it will be necessary for school boards to give consideration to all possible solutions to their accommodation problems. Among the possibilities are proposals such as the following:

(a) The maintenance of a high level of utilization of space having regard for the goals, and aims and objectives of the school system, the programs offered to achieve them, and the quality of education it is expected will be realized;

(b) The organization of accommodation on the basis of a cluster of schools, usually including several elementary schools and a secondary school, which provide accommodation for pupils within a defined area.

(c) Commitment to provide additional accommodation should be made only after the need is clearly established rather than on predictions of development of housing in new subdivisions. Often the estimates have a tendency to be overly optimistic or are unrealized until much later than the original plans or enthusiasm might have suggested;

(d) School boards should make known to planning boards and municipal authorities who control the development of subdivisions the amount of the available school accommodation and its location. Subdividers or developers may then be told, before they make any commitment to prospective home purchasers, where they might reasonably expect to find the nearest school accommodation. It should be clearly established that neither the Province nor the local taxpayers can be expected to provide new or additional schools in subdivisions built in locations remote from available unused pupil places still being paid for on long term debentures;

(e) Each board should develop the alternatives open to it to meet accommodation needs by transportation to other schools in its jurisdiction or to schools in other jurisdictions, provision of temporary accommodation by portables, adjustment of school boundaries, or even short-term utilization of space on a "double shift", the latter two never popular with the parents of children who may be affected. The possibility that space in the senior grades of elementary schools or junior grades of secondary schools for pupils from the other level ought to be considered;

(f) In areas where no alternative exists but to provide additional school accommodation for large subdivisions, it should be realized that there is some evidence, requiring further study and research before complete acceptance, to indicate that enrolments in schools within the subdivisions move through a cycle reaching a peak between the seventh and ninth years and then declining to a

plateau. Boards should, therefore, in planning new accommodation for these areas, consider building permanent accommodation for the plateau level of enrolment and temporary accommodation for the remainder of the enrolment between the plateau and peak levels. The use of portable classrooms to provide for temporary enrolment bulges should be encouraged as part of good planning in these circumstances as well as on a broader basis.

The most important conclusion to be drawn from our studies to this point is that the multi-year forecasts submitted by school boards in 1970 and 1971 for additional accommodation are excessive in the extreme and almost completely unjustified. It would be unwise and even irresponsible to proceed with the construction of the amount of accommodation reported in the forecasts for many boards until the full implications of these figures have been reassessed and until need has been confirmed on the basis of the latest available data and detailed analysis of all the relevant information and circumstances.

CHAPTER 6

PROCEDURES FOR APPROVAL OF CAPITAL BUILDING PROJECTS

The procedures by which a school board secures approvals for a capital building project are contained in a comprehensive document entitled, Capital Grant Plan, 1971. In the Introduction it is stated that the publication "is provided as a guide for school boards making application to the Department of Education for legislative grants in respect of the capital cost of school building projects".¹ As a description of present procedures, the Plan is a most useful and helpful publication. The suggestions and requirements set out in the Plan are the result of experience gained over a considerable period of time.

With the demand for additional accommodation following World War II and in consideration of the fact that most boards had had little or no recent experience in the construction of schools, the Department of Education established in 1945 a new branch within the central office. The function of the branch was to analyse the need for accommodation as proposed by each board and to review the plans and costs for each building project. This assessment determined the accommodation that was considered necessary and the amount of the expenditure that was to be approved for legislative grant purposes. The information was provided to the Ontario Municipal Board to assist it in the determination of the amount of capital indebtedness local municipalities could assume by the issue of debentures for school purposes. By and large, these controls were realistic and effective during the period of rapid expansion necessitated by greatly increased enrolments and the introduction of innovations in curriculum and program.

With the changed circumstances that now exist, however, the Committee considered that a reassessment of the procedures for approvals was desirable. There was some feeling that school boards and the Ministry of Education may not be requiring as complete a justification for new or additional accommodation as the circumstances warrant. In our judgement, on the basis of the statistics, data and information which we have provided, there is a need for extreme caution before any decision is made to propose or approve the provision of additional accommodation of any kind. It is already apparent that a number of boards have

¹ Capital Grant Plan, 1971, Ontario Department of Education, Toronto, 1971, p.3.

excess accommodation at the elementary school level and that, unless restraint is exercised, a similar situation will occur at the secondary level in a few years. The changes in procedures which we propose are designed to eliminate any doubt about the legitimacy of approvals for additional space, and to simplify the methods by which these objectives are achieved.

Establishment of Need for New Accommodation

(a) The assessment by a school board of need for new accommodation should take into account all the factors which might influence the result. Among the topics to be considered are, for example, demographic studies, economic conditions, industrial and commercial development, housing provisions and prospects in these areas. Some of the relevant information is available on a National and Provincial basis through public bodies such as Statistics Canada, the Economic Council of Canada, the Ontario Economic Council, the Economic Analysis Branch of the Ontario Ministry of Treasury, Economics and Intergovernmental Affairs, and The Ontario Institute for Studies in Education. In addition, a significant contribution to the literature is made through the research programs of many private organizations in the business and commerce, labour, municipal and other fields. There is a real need to bring together and analyse the findings of these organizations in a way that will be meaningful and have greatest relevance for those at the school board level who are responsible for the planning and development of school facilities.

It is the view of the Committee that it would be a wasteful duplication of time and effort to have each school board secure and attempt to provide its own analysis of the reports issued by National and Provincial organizations. Rather, this function ought to be performed by the Planning and Research Branch of the Ministry of Education. The prospects are that the work would be more complete and accurate when conducted by a single unit staffed by competent specialist personnel within the Ministry.

The results of the co-ordination and analysis of the information and data should be disseminated, at least annually, to all school boards as a first priority and to other educational and public bodies who might have an interest in or use for this material.

(b) With the information provided to it about the National and Provincial scenes, it would become the obligation of each school board to relate the findings to its own jurisdiction. For example, it has been shown in the recent past that approximately one-half the immigrants to Canada come to Ontario and about one-half of this group settle in the City of Toronto. While other considerations go into the calculation of the number of immigrant children who will enrol in the schools of a particular system, the Board of Education for the City of Toronto and the Metropolitan Separate School Board will have some indication of the impact on them of increasing or declining immigration. Or, if the birth rate is shown to be declining at the National or Provincial levels, the school board will have to assess, in conjunction with other relevant factors, the implications of this development for the schools of its jurisdiction.

It will be necessary for each board to gather additional information and data available locally from, for example, municipal authorities, assessment offices, and planning boards. An intensive analysis of all the relevant data should be made by someone to whom this responsibility is assigned by the board as part of the planning process.

An approach to the study of the situation at the board level is illustrated by the work contracted by the Waterloo County Board of Education with The Ontario Institute for Studies in Education. The report¹ of this study includes sections on the economic development of Waterloo County, historical background, natural and human resources, labour force distribution, population, elementary and secondary enrolments, and projected classroom needs. The procedures used are simple enough that most boards could conduct their own studies without outside help or with a minimum of consultation with specialists. One important improvement over the Waterloo study could be achieved if the boards responsible for the Public Schools and the Separate Schools could jointly analyse the situation within their common geographic areas. There would then be an overall assessment of the requirements which would reduce the possibility of unnecessary duplication of facilities for the same students.

¹Watson, Cicely and Quazi, Saeed, Future Needs for Elementary and Secondary School Classrooms in the County of Waterloo, Department of Educational Planning, The Ontario Institute for Studies in Education, Toronto, 1970.

(c) A school board considering its accommodation needs should have available to it, as one important piece of information, a complete inventory of its existing accommodation. This inventory should be based on a uniform check list so that comparisons can be made of areas within a board's jurisdiction, probably on the basis of particular geographic limits or a "family" of schools. In addition, it will be necessary to make comparisons among boards on some common basis. It is, therefore, considered that the Ministry of Education, in co-operation with school boards and representatives of other interested bodies, ought to develop a uniform inventory check list of all pupil accommodation and other space under the control of the boards. Complete instructions for assessing the space should be provided so that the maximum possible degree of consistency of the data can be achieved. Each board should then develop and maintain on a current basis a complete record of its accommodation in accordance with the uniform inventory check list. Once established, it will be a simple operation to maintain.

We are aware that some work has been done in the compilation of a record of space but we have doubts about the comparability of the data for different schools and boards. If the information already secured can be transferred to the format of the proposed uniform inventory check list, there would, of course, be no need to repeat the work for those schools for which a measurement of space has been completed.

(d) When each board has a complete inventory of its space, it will be possible to calculate the rate of utilization of all teaching areas and other accommodation under its control. Again, it will be necessary to ensure that the basis of calculation is uniform for schools and school systems. In our analysis in Chapter 4, we took the total number of pupils in the various programs, divided by the effective capacity of classrooms, to get the number of required classrooms. We then compared this figure with the available classrooms to determine the rate of utilization. It may be that this method could be refined to provide the basis for determination of the rate of utilization in the future. If our other recommendations are adopted, it will probably be necessary to develop a new formula to meet the new circumstances. In any case, it is considered that there will be no problem in devising an acceptable procedure.

It is our view that the chief executive officer ought to report to the board the rate of utilization of accommodation on a regular basis or when there has been

any significant change. It would be desirable to make such a report as early as practicable in each school year. This procedure would ensure that the board was fully aware of its accommodation needs and that any proposals for additional space could be reviewed in the light of the latest information and data. The reasons for any non-utilization or under-utilization of available pupil places should be documented, justified and understood.

Building Proposal

When a school board decides to provide additional accommodation, it submits to the Ministry of Education a Building Proposal incorporating Form Bldg. 15 - Request for Approval, and Form Bldg. 16 - Schedule of Eligible Spaces (Table 13). Once an approval of a Building Proposal is given by the Ministry for legislative grant purposes and the necessary initial approval is given by the Ontario Municipal Board for the issue of debentures, the school board may proceed with the development of preliminary sketches for the new accommodation. It is, therefore, at the Building Proposal stage that the actual commitment is made to provide more space. Consequently, this step in the procedure is of paramount importance.

1. While additional information and data may be provided by a school board and the Regional Office to supplement the completed Building Proposal form, it is the view of the Committee that the documentation required at present is inadequate in a period of declining enrolments. It does not provide justification for a board's request for new accommodation nor does it permit the Ministry of Education to make a valid judgement about the board's need for more space. Specifically, the forms have at least the following deficiencies:

(a) They do not require that each building project be presented in the context of the accommodation in existing schools serving the geographic area surrounding the site of the proposed school, nor do they relate the need for new accommodation to the board's total existing facilities;

(b) They do not require adequate documentation for the enrolment figures presented in support of the need for a new building, nor do they relate these figures to the present enrolments and projections for the surrounding area or for the board's total jurisdiction;

TABLE 13¹

1 - INTRODUCTION & GENERAL INFORMATION
1.2 Submissions and Worked Examples



ONTARIO DEPARTMENT OF EDUCATION

LEGISLATIVE GRANT APPROVALS FOR SCHOOL CONSTRUCTION

REQUEST FOR APPROVAL: BUILDING PROPOSAL
(DELETE AS INAPPLICABLE)

Ex. No. 1

FORM 61-9, 10
REV. JUNE 68

FOR ALL REQUESTS	1. SCHOOL BOARD: Hypothetical County Board of Education		3. SCHOOL NAME: Unnamed-Amy Avenue		9. PROJECT NUMBER DEPT: BOARD: B02-71																																																																											
	2. LOCATION OF SCHOOL OR SITE: Amy Avenue		4. MUNICIPALITY: Big Town		10. NEW SCHOOL: ☒ ALTERATIONS: ☐ PORTABLE/TLR: ☐																																																																											
BUILDING PROPOSAL ONLY	5. ELECTORAL DIVISION: PROVINCIAL: East-West FEDERAL: North-South		6. ACCOMMODATION UNIT VALUE ZONE: 1 (SEE MANUAL)		7. GRADES SERVED BY THIS SCHOOL: K - 6																																																																											
	8. TYPE OF SCHOOL: Elementary																																																																															
11. ENROLLMENT AT COMMENCEMENT OF ACADEMIC YEAR AT PROJECT SCHOOL: <table border="1"> <thead> <tr> <th rowspan="2">ELEM.</th> <th rowspan="2">SECDY.</th> <th colspan="4">PREVIOUS YEARS</th> <th colspan="4">FUTURE YEARS</th> <th rowspan="2">MAR. 1971</th> </tr> <tr> <th>19</th> <th>19</th> <th>19</th> <th>19</th> <th>19 71</th> <th>19 72</th> <th>19 73</th> <th>19 74</th> <th>19 75</th> <th>19 76</th> <th>19 77</th> </tr> </thead> <tbody> <tr> <td>1/2 KOTR.</td> <td>1/2 KOTR.</td> <td></td> <td></td> <td></td> <td></td> <td>82</td> <td>78</td> <td>80</td> <td>75</td> <td></td> <td>70</td> <td>82</td> </tr> <tr> <td>GRADES</td> <td>GRADES</td> <td></td> <td></td> <td></td> <td></td> <td>321</td> <td>320</td> <td>309</td> <td>307</td> <td></td> <td>303</td> <td>321</td> </tr> <tr> <td>SPECIAL ED.</td> <td>SPECIAL ED.</td> <td></td> <td></td> <td></td> <td></td> <td>30</td> <td>29</td> <td>29</td> <td>28</td> <td></td> <td>27</td> <td>30</td> </tr> <tr> <td>TOTALS</td> <td>TOTALS</td> <td></td> <td></td> <td></td> <td></td> <td>435</td> <td>427</td> <td>418</td> <td>410</td> <td></td> <td>400</td> <td>435</td> </tr> </tbody> </table>							ELEM.	SECDY.	PREVIOUS YEARS				FUTURE YEARS				MAR. 1971	19	19	19	19	19 71	19 72	19 73	19 74	19 75	19 76	19 77	1/2 KOTR.	1/2 KOTR.					82	78	80	75		70	82	GRADES	GRADES					321	320	309	307		303	321	SPECIAL ED.	SPECIAL ED.					30	29	29	28		27	30	TOTALS	TOTALS					435	427	418	410		400	435
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DESCRIBE ANY PROBABLE FUTURE RE-ORGANIZATION OF GRADES & STATE EFFECT ON ENROLLMENT: K-6 pupils from South P.S. will be transferred to this school; South P.S. will become 7-8 only, East 2 room school abandoned. Additional data attached.																																																																																
12. ANTICIPATED NEW HOUSING ETC. IN SCHOOL ATTENDANCE AREA: <table border="1"> <thead> <tr> <th rowspan="2">PVT. - PRIVATE PUB. - PUBLIC HOUSING ETC.</th> <th rowspan="2">EXPECTED PUPIL RATIOS</th> <th colspan="4">NUMBER OF UNITS TO BE OCCUPIED</th> </tr> <tr> <th colspan="2">19 72</th> <th colspan="2">19 74</th> <th colspan="2">19 76</th> </tr> <tr> <th></th> <th></th> <th>PVT.</th> <th>PUB.</th> <th>PVT.</th> <th>PUB.</th> <th>PVT.</th> <th>PUB.</th> </tr> </thead> <tbody> <tr> <td>SINGLE FAMILY HOMES</td> <td>.3</td> <td></td> <td>28</td> <td></td> <td>24</td> <td></td> <td>25</td> <td>25</td> </tr> <tr> <td>DETACHED HOMES</td> <td>.5</td> <td></td> <td>20</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>TOWN & ROW HOUSES</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>APTS. UP TO 4 STOR.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>APTS. OVER 4 STOR.</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2">NUMBER OF PUPILS</td> <td>18</td> <td>7</td> <td>7</td> <td>8</td> <td>8</td> <td></td> </tr> </tbody> </table>							PVT. - PRIVATE PUB. - PUBLIC HOUSING ETC.	EXPECTED PUPIL RATIOS	NUMBER OF UNITS TO BE OCCUPIED				19 72		19 74		19 76				PVT.	PUB.	PVT.	PUB.	PVT.	PUB.	SINGLE FAMILY HOMES	.3		28		24		25	25	DETACHED HOMES	.5		20						TOWN & ROW HOUSES									APTS. UP TO 4 STOR.									APTS. OVER 4 STOR.									NUMBER OF PUPILS		18	7	7	8	8		
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	CONSTRUCTION: 530,000.00 CONTINGENCIES: 16,000.00 ALTERATIONS: - SITE IMP'VT: 20,000.00 OTHER P.S. TAX: -16,680.00 S.D. TOTAL: 549,320.00 ARCH/ENG FEES: 35,706.00 FURN.-EQUIPT.: 47,621.00 TOTAL: 638,647.00		2. GROSS FLOOR AREA OF PROJECT: SQ. FEET 3. ARCHITECT'S NAME: ADDRESS: TELEPHONE: 4. REF. USE ON DMSL SENT WITH THIS REQUEST: DATE ON DMSL:		5. ADDRESS & TELEPHONE: 6. Any Ave. (111) 111-1111 7. DATE August 10, 1971 LEAVE THIS SPACE BLANK.																																																																											
2. ANTICIPATED BID DATE: January, 1971																																																																																

FOR DETAILS OF DISTRIBUTION SEE MANUAL OF SCHOOL BUSINESS PROCEDURES

¹ Reproduced from Capital Grant Plan 1971, op. cit., p.6.

TABLE 13¹ (Continued)

1 - INTRODUCTION & GENERAL INFORMATION
1.2 Submissions and Worked Examples

 ONTARIO DEPARTMENT OF EDUCATION

 Ex. No. 1
FORM B.L.O.C. 10

LEGISLATIVE GRANTS FOR SCHOOL CONSTRUCTION

REQUEST FOR APPROVAL: BUILDING PROPOSAL / SKETCH / ~~ESTIMATE / BUDGET~~

SCHEDULE OF ELIGIBLE SPACES (BASED ON ☒ OF ☐)				Project Number ☐ Not Yet Assigned			
ELIGIBLE SPACES		PUPIL LOADS		NET FUNCTIONAL FLOOR AREA		ACCOMMODATION UNITS	
DESCRIPTION	NO. OF	SEMI.	ROOMS	DIMENSIONS	SQUARE FEET SUB TOTAL	TOTAL	SEMI. VOCAL
<u>Project - New School</u>							
Kindergarten	2	80			850	1,700	320
Classrooms	8	280			750	6,000	1,120
Special Education-Pr.	1	12				800	174
Special Education-Jr.	1	16				800	174
Music Room-Vocal	1	35				1,200	215
Library Resource Centre	1	-				2,100	325
General Purpose Room	1	-				2,575	357
Change Rooms	2	-			350	700	80
Lunch Room	1	-				900	121
Health Unit	1	-				320	51
Counselling & Guid. Ctr.	1	-				250	45
Total Pupil Load		423				17,355	
				Total N. F. F. A.			
				Project A. U. Total			2,982
<u>Calculated Approved Cost:</u>				2,982 A. U. @ \$201.30 or	\$600,277.00		
*Letter substantiating need attached.							

¹ Reproduced from Capital Grant Plan 1971, op. cit., p.7

(c) They do not take into account the availability in a community of facilities, presently not under the jurisdiction of the board, which might be utilized on a temporary basis to meet a need which may no longer exist in a few years.

Our earlier proposals for more sophisticated enrolment projections, the development of an inventory of existing space, and the calculation of rates of utilization will do much to overcome the limitations inherent in the present procedures. Each building proposal should be supported by at least this information. It is conceivable that the result could be a reduction in the number of building proposals submitted by boards to the Ministry. Since the Ministry will be in a better position to determine the need for new accommodation, it may well be that fewer proposals will be accepted for legislative grant purposes. In any case, approval of a project for legislative grant purposes should not be given unless the evidence of need is conclusive and unless it has been clearly established that the best way to meet the need is by the provision of new additional accommodation.

2. The present procedure for the calculation of space to be provided and the approved cost for a proposed building project is illustrated in Table 13. In the example, the elementary school is to include kindergartens, regular classrooms, special education classrooms, a music room, a library resource centre, a general purpose room, change rooms, a lunch room, a health unit area, and a counselling and guidance centre. Each area is assigned pupil loadings as described earlier. Then, a square foot allowance is applied to each unit and a total square foot allowance calculated for each type of unit. The cumulative total is the square footage allowance for the building called the "Net Functional Floor Area".

To calculate the approved cost, the Ministry of Education applies an "Accommodation Unit Factor" to the square footage for each unit type of accommodation. The total of these figures gives the Accommodation Units allowed. The project is then assigned to one of five categories on the basis of the number of Units. Each category has a designated cost factor. The approved cost is secured by multiplying the number of Accommodation Units by the cost per unit. Adjustments are made for each of three zones into which the Province is divided to take into account varying construction costs. The result is the applicable Calculated Approved Cost for the project.

The square footage allowance for each type of accommodation is based on the program to be conducted in the area. For example, at the elementary school level a primary special education classroom is assigned a Net Functional Floor Area of 700 sq.ft. to 900 sq.ft. The Accommodation Unit Factor varies from a minimum of 170 to a maximum of 176. According to Regulation 191 - Elementary and Secondary Schools - General¹, the maximum number of pupils who may be assigned to a class of this type is twelve. For a junior special education classroom the data for the Net Functional Floor Area and the Accommodation Unit Factor are the same. However, the maximum number of pupils who may be assigned to this type of classroom is sixteen. Consequently, the same space may be allowed for older and bigger pupils but for four more of them as well.

When the comparison is made with the allowances for pupils in regular classes, it is seen that the square footage allowance is a standard 750 square feet and the number of pupils is 35. In the case of the primary special education classroom, approximately the same area is provided for one third the number of students and for the junior special education classroom for less than one-half the number of students.

While the range of types of accommodation at the elementary school level is limited, it is extended considerably at the secondary level because of the greater variety of programs offered. It might be anticipated, therefore, that it would be necessary to assign a specific square foot allowance for each of the specialized subjects. In fact, the allowances for most subjects have been placed in a small number of categories.

The procedures for determining square footage allowances and approved costs have been described in some detail to show their complexity, the limitations they place on the planning of space, the inconsistencies they perpetuate in terms of space allowed for different programs, and their inflexibility to meet local conditions and circumstances. In the universities where there is a greater variety of program and degree of specialization, it has been possible to develop a formula with two major components, namely a net assignable square footage per student and a unit cost per square foot. It is the view of the

¹Elementary and Secondary Schools - General, p.32.

Committee that a similar basic formula utilizing the same two factors can and should be developed for each of the elementary and secondary levels. If a formula of this type were applied, it would eliminate much of the complexity of the existing calculations. At the same time, it would permit teachers, supervisors, administrators, boards and architects to be more creative in the planning of accommodation to meet the needs as they exist at the local level. It would also provide an opportunity for the maximum degree of flexibility to be achieved so that changes in aims and objectives, programs and priorities could be accommodated more easily.

The Architectural Services Section, School Business and Finance Branch, of the Ministry of Education has the necessary information and data which could be used as a basis for the determination of reasonable allowances of space per pupil and cost per square foot. The officials of the Section ought to be given the responsibility for the development of recommendations in these areas.

3. Under existing procedures a school board is required to submit to the Ministry of Education all capital projects where expenditures are to be considered for approval for legislative grant purposes or where debentures are to be purchased by The Ontario Education Capital Aid Corporation. Where a capital building project, usually by a larger board, is not eligible for grant and when it is financed from current funds, it is not necessary that the project be submitted to the Ministry of Education. There are a number of reasons why all capital projects ought to be reported to the Ministry. For example, experience has shown that the Architectural Services Section has been able to offer advice resulting in improvement in plans and in financial savings. There is a real need for a complete inventory of all space regardless of the use to which it may be put at any particular time. In addition to the complete inventory of its accommodation by each school board, it may well be that the Ministry should develop on the computer the complete inventory of all accommodation in the Province. Then, if all building projects, abandonment of obsolete buildings, etc., are processed through the Ministry, it will be a simple matter to make the changes to maintain an up-to-date record. It is our view, then, that all capital projects ought to be processed in the same manner as those eligible for grants or financed through an issue of debentures. We are not, however, suggesting that the Ministry of Education should have the authority to veto a capital project

which is not eligible for approval for grant purposes or for which debentures are not to be purchased by The Ontario Education Capital Aid Corporation.

4. When the school building program began to accelerate at the end of World War II, the Department of Education appointed technical advisers to assist local boards with their plans. In 1964, the School Planning and Building Research Office was established. It "helps to guide plans, anticipating the future needs of school buildings. It investigates methods of making proper use of space to meet the educational program and researches new building techniques and materials to achieve economic design and construction. Its services include the publication of brochures; a consultation service to those involved in school building; and conducting annual workshops".¹ The complete list of publications issued by the School Planning and Building Research Section is presented in Appendix C. The services provided by the Section have made a significant contribution to the development of school construction in the period of rapid expansion of facilities.

There will continue to be a need for the provision of these functions in the decade of the 1970's but with some changes in emphasis. For example, the decreasing volume of construction, the necessity to utilise facilities in different ways, the requirement for a high degree of flexibility in any new facilities, the greater use of school buildings by the general public, the need for economy in materials and methods of construction will all challenge the researchers and justify a continuing and important role for the Architectural Services Section.

The recommended simplification of the basis for calculations of the space allowance and of the cost for a building project will necessitate the collection from school boards of information and data about their school accommodation. The analysis of this material will be required to maintain the formula on a current basis. It will also assist in the development of certain refinements of the basic formula applicable to such areas as rehabilitation and renovation of existing structures.

A simplified version of the Capital Grant Plan 1971, incorporating the new basis of calculation and other relevant information, will still be required. It will

¹ School Planning and Building Research, Pamphlet issued by Ontario Department of Education, Toronto, 1970.

also be desirable to issue up-to-date versions of the brochures on special instructional areas along the lines of those listed in Appendix C. It would be helpful if the recommended space allowance were more realistic and consistent with the approved costs for these facilities. They should take into account the overall accommodation in a school instead of a specialty only. Sample plans might be developed as illustrations of the way that specialty areas can relate to one another and of the way that they might be integrated on a total school basis. The most important function of the Architectural Services Section will still be the consultative services it provides to officials, planners, architects and boards. In addition to the areas where the Section has traditionally been most helpful, it will be necessary to place a new emphasis on the establishment of need for additional accommodation. Our studies support the conclusion that the best advice which could be given to many boards is that they not proceed with their present plans for construction of additional accommodation while others should be advised to reduce to a minimum their projected building programs. Where evidence in support of a building proposal is inadequate to justify approval and where persuasion does not result in postponement or cancellation of the project, then it becomes the function and responsibility of the Section to exercise the degree of firmness necessary to prevent the construction of unneeded accommodation.

5. The "Flow Chart Illustrating Submission Procedures" are presented in Appendix D. These charts show the steps necessary to secure approval of the several agencies which have an interest in any building project. It is required that a school board submit a set of preliminary sketches and working drawings and specifications to each of the Ontario Fire Marshal, the Ministry of Health or the local Medical Officer of Health, and the Air Management Branch of the Ontario Ministry of the Environment. Approval of these bodies is required before a building project may proceed. Requirements of local governments in the areas of health, safety from fire, and building standards must also be met.

The practice of separate approvals of plans by each specialist agency was begun at a time when circumstances were much different than they are now. The larger school administration units now have knowledgeable personnel who can interpret the requirements regarding safety, health and pollution control and who can see that these are taken into account in the development of plans. Most architects

have also had experience with school building so that they take the requirements into account from the beginning of each project. These considerations support the conclusion that the procedure to ensure the attainment of the objectives of the special agencies should be simplified.

Architects and school boards have suggested that it should be possible to centralize the issue of the several approvals in one agency. Instead of the necessity to have copies of the building plans checked in separate organizations to see that they meet the requirements of those agencies, it is considered that each of the Ontario Fire Marshal, the Air Management Branch of the Ministry of the Environment, and the Ministry of Health should prepare and issue their standards in written form to school boards, architects, and planners. It should then be possible for the School Plant Approvals office of the Ministry of Education to ensure, when it is considering plans for purposes of its approvals, that the requirements of the other agencies are met. The involvement of the agencies would then be at the policy level in the determination of the necessary standards but not in the administration of those policies.

The recommended procedure should reduce the number of staff in the various agencies involved in the review of plans, it should reduce the work load, paper work and correspondence of supporting staff in the agencies and in school boards, it should eliminate much of the present "red tape", it should speed up the approval procedure, and should result in a considerable financial saving.

6. In an endeavour to make some provision for the varying costs of construction in different areas, the Ministry of Education has established "Geographic Cost Zones" and a "Table of Values". Both are reproduced in Appendix E. Under the formula, the Province is divided into three areas with all of Southern Ontario and the districts of Muskoka, Farry Sound and part of Nipissing in Zone 1. The remainder of Nipissing and north and west including Algoma are in Zone 2. The three most westerly districts are in Zone 3.

Under the revised basis for determination of costs, it will still be necessary to maintain a differential among different areas. The adjustment would have to be expressed in terms of an allowance per square foot of costs or an overall percentage of the cost of a project. While some research may have to be done to

determine the appropriate allowances, the basic data will be available within the School Plant Approvals office. It should, therefore, be a relatively simple matter to adjust the allowances to take into account fluctuations in building costs as reported from the field, in construction trade journals, and by architects and planners.

School boards, like all similar corporations, must face the problems of low and high periods of demand in the construction industry and the normal economic changes within their areas when they are considering tenders for schools. Consequently, there is a need to ensure that the cost estimate for a building is realistic for the particular area and that it reflects the latest developments and circumstances. Otherwise, difficulties will arise for the board because the expenditure limit is too low or there may be an inflated expenditure because the allowable cost is excessive. The area of cost differentials should be kept under constant review by the School Planning and Building Research office of the Ministry and the necessary adjustment made for each zone as the facts dictate.

Even with the suggested degree of surveillance and sensitivity to changing costs, it is recognized that it will not always be possible to adjust to "supply and demand" conditions in a local board jurisdiction within a zone. The possibility of extreme variations between the actual cost and the approved cost should be greatly reduced.

The submissions to us by school boards in various parts of the Province raise serious doubts about the validity of the present geographic boundaries for the zones and the amount of the adjustments for each zone. For example, to apply the same allowance for a board in a centre where construction companies have their headquarters and for a board several hundred miles distant seems unjustified. In the same manner, a more remote project in Southern Ontario may be more costly than a similar project in an urban centre in the North. In any case, consideration should be given to a refinement of the location allowances and the geographic boundaries within which they are operative.

School Sites

In general, we subscribe to the principles set out in the publication, Site¹,

¹Site, Ontario Department of Education, Toronto, 1967.

issued by the School Planning and Building Research office in 1967 as a guide to the selection, acquisition, and development of sites for elementary schools embracing classes from kindergarten to the end of grade 6. We endorse heartily the recommendation that, wherever possible, school sites be located adjoining park lands and recreation areas. Often the actual school site can be smaller if the other facilities are available for use by school pupils. In newly-developing areas it is desirable and important that planning boards, recreation councils, municipal authorities and school boards work co-operatively to achieve the best and most economical integration of the land areas to be provided.

Another factor that may influence the situation in the future is the possibility of combining on one site provision for both public and secondary school pupils. Or, by co-operative action of board of education and Separate School boards it may be possible to have joint occupancy of the one site by all three groups. The utilization of some of the more costly facilities by the three school organizations as well as by community groups could result in avoidance of duplication of site and facilities with consequent reduction of costs to the taxpayers.

One of the most difficult problems in the selection of a school site is the determination of size. All too often the decision is made on the basis of total population and school enrolment from a specific or limited geographic area as estimated for the immediate future. When further development occurs in later years, a building addition is often made on the original site with the result that a smaller play area than formerly must now serve a larger school population. Too many examples exist to illustrate the folly of this pattern. Homes are built adjoining school sites, land costs escalate, and ultimately it becomes most difficult to enlarge the site because of adverse community reaction to expropriation or because of prohibitive costs.

In the light of these considerations, it may be that the suggested acreages for the various types of schools, as set out in the Ministry's publication¹, are conservative and that larger areas ought to be recommended. A recent publication suggests the following:

¹Site, op. cit. p.25.

Reasonable Minimum Standards for School Sites

<u>Type of School</u>	<u>Basic Number of Acres</u>	<u>Additional Acres per 100 pupils</u>
Elementary (k-6)	5	1
Intermediate (7-8 or 7-9)	10	1
Secondary (9-12 or 10-12)	15	1

In our judgement the minimum size for an elementary school site ought to be eight acres for a seven-room school with corresponding additional area as the number of classrooms increases. At the secondary level, the proposed minimum area is eighteen acres. Where buildings for both levels are located on one site, it would be possible to provide somewhat less acreage than the combined areas. Proximity to parks and recreation areas might also reduce the total acreage necessary.

Where lands adjoining school sites have been designated as park land, the larger area available to pupils has been a definite asset. Under the provisions of Section 33, subsection (9) of The Planning Act, as amended by Section 5, subsection (3) of The Planning Amendment Act, 1972, however, it is possible that a municipal council might decide to sell park land adjoining a school site after a school board had reduced its initial size requirements because of its proximity to a park. The legislation permits a municipality to sell certain land conveyed to it for use for park purposes within five years of such conveyance if the Minister approves, or after five years without the Minister's approval. It is the view of the Committee that the problem could be overcome if there were a further amendment to The Planning Act excepting park land adjacent to a school site from the possibility of sale by the municipality. Otherwise, the cost of a new school site could be increased substantially because of the necessity to provide more land initially or the cost of additional land to enlarge a site as the result of a sale of adjoining parkland could be prohibitive.

The implications of the suggestions regarding the size of school sites in terms of cost are fully understood by the Committee. At the same time, it is our view that the taxpayer can no longer afford to make the exorbitant expenditures associated with the acquisition and expansion of sites after full development has taken place.

CHAPTER 7

FINANCING CAPITAL BUILDING PROGRAMS

Cost of Accommodation

Elementary

While the time lag between the initiation of a building project and its completion may extend from at least one year up to two years or more, it is possible to make some assessment of costs in a specific year by counting the project in the year of completion. The data for the elementary level are presented in Table 5 (page 38). In 1946, the cost to provide 6,500 pupil places was estimated at \$2,600,000. The cost was, therefore, \$400 per pupil place. The average cost for each elementary pupil place built in 1969, 1970 and 1971 was \$1,713, \$1,577 and \$1,611 respectively, or an overall average for the three years of \$1,632 per pupil place. The latter figure was four times the cost per pupil place twenty-five years ago.

Secondary

The comparable data for the secondary level are presented in Table 6 (page 42). While there were too few projects in 1946 to make any comparison about cost per pupil place, the figure in 1950 was \$1,485. The average cost for each secondary pupil place built in 1969, 1970 and 1971 was \$3,530, \$3,321 and \$4,455 respectively, or an overall average for the three years of \$3,742 per pupil place. This average was, therefore, 2.5 times the figure twenty-one years previously.

In quoting these figures no allowance has been made for the changing value of the dollar or other factors influencing costs over the period of years for which the comparisons are made.

Efforts to Economize

Because of rapidly spiralling costs, attempts have been made to encourage building methods and to find new procedures to control the expenditures for school accommodation. Considerable attention has been given to these possibilities by the "Study of Educational Facilities (SEF)" project. The results of these

investigations are contained in three series of reports¹ issued since 1968. Particular attention was given to the utilization of the "systems" approach in the provision of schools in Metropolitan Toronto. By this method, which depends on a considerable volume of construction and consistency and uniformity in materials used, it was hoped that savings could be achieved. To date it has not been possible to realize this objective although there have been some positive accomplishments in the areas of educational and physical design and stimulation has been given to innovation in several aspects of school construction.

In the last two or three years, several school boards have been building a number of schools using the same basic plans modified to meet the conditions on each site. As a result, architectural fees have been reduced from the usual 6.5 per cent for elementary schools and 7 per cent for secondary schools to 3.625 per cent and 3.75 per cent respectively.²

In a school jurisdiction where additional accommodation is still required in considerable quantity, it has been demonstrated that the tendering of a number of identical or similar schools at one time has resulted in some moderate savings in construction costs in a few cases of record.

New building materials designed to reduce initial costs and to hold subsequent maintenance costs within reasonable limits have been introduced from time to time. For example, permanent wall finishes and new types of floor coverings have been widely used by many boards in efforts to reduce maintenance expenditures over the life of the building because of the steadily increasing costs of redecoration, replacement, etc.

It is evident that it is false economy to provide a building so cheaply that the maintenance and operating costs over the life of the structure are high and the life of the building is shortened. There are examples from the experience of some school boards over the last twenty-five years to show that

¹ The Metropolitan Toronto School Board Study of Educational Facilities, Toronto, 1968.

² Conditions of Engagement and Schedule of Minimum Professional Charges, Ontario Association of Architects, 50 Park Road, Toronto, 1969, pp.12-16.

some schools constructed at a relatively low initial cost have required extensive maintenance before their abandonment well within the twenty-five year period. The balancing of initial costs against lifetime maintenance and operating costs ought to be weighed carefully when decisions are being made about the materials and quality of construction to be used in a new building.

At the same time, there have been claims that some schools have been constructed with more elaborate facilities and amenities than a sound balance between initial cost and subsequent maintenance can justify. Under the provisions whereby the Department of Education has reviewed the plans for each new school or addition and has determined an expenditure for grant purposes, the approved expenditure has provided for the basic requirements. A local board could, however, exceed the amount approved for grant purposes as long as the additional expenditure was repaid wholly by the local taxpayers on the unapproved portion. This arrangement has permitted the inclusion in the building program of features which the school board or the local community desired but for which the benefit of grant on the expenditure was not available to them.

The inclusion of particular materials in the construction of most schools has been a source of public criticism on numerous occasions. School authorities have not taken comments on these and other innovations sufficiently seriously to conduct studies and report on the utilization of them. It is time that objective information and data in these areas were made available to the public.

For example, every new school utilizes a variety of floor coverings. The most expensive type is terrazo. There are good reasons for the use of this material in certain areas of the school building. Most people would agree that in the interests of cleanliness, sanitation, and ease of cleaning, its use is justified in washrooms. In the heavy traffic areas, such as corridors, it is durable enough to withstand the wear and tear it receives. In the playroom or gymnasium, wood flooring is frequently used because of the nature of the physical education program. In standard classrooms, linoleum is often used because it can be cleaned more easily than wooden floors. In the schools of earlier days, wooden floors created problems because of the difficulty of washing them, the amount of dust they retained, and the use of oil to minimize this factor. It is not difficult to justify the modern alternative in terms of cleanliness and reduced fire hazard.

But the improvements brought about by the use of these materials have not been the source of criticism. It is only when carpeting is provided that interest in a floor covering receives considerable attention. Without attempting in this Report to resolve the argument for or against the use of this material and recognizing that a complete study ought to be conducted, it is true that in kindergarten and junior classes, where children often sit or lie on the floor, a case can be made for the use of carpeting. The avoidance of cold floors and reduction of noise when so much movement of furniture occurs are only two of the reasons which justify its use in these areas. The use of the vacuum cleaner makes maintenance much simpler and less costly than the waxing and polishing of linoleum for these rooms. The use of carpeting in administration areas, offices, and some auxiliary accommodation should be determined in relation to the functions to be performed there, the relative costs of other covering materials, the ease of change of services such as telephone lines, electricity services and the like. In other words, the decision to provide one material instead of another ought to be made only on the basis of factual studies weighing all the advantages against all the disadvantages, educationally and economically.

The figures presented earlier in this Chapter indicate a tremendous increase in the cost per pupil place for school accommodation. The increase seems to have general applicability to many other types of buildings. For example, in January, 1972, Statistics Canada reported that building costs for residences had risen 85.5 per cent since 1961, while non-residential building costs had risen 76 per cent in the same period¹. The results of a survey² in 1969 of non-residential building costs are presented in the following table:

<u>Type of Building</u>	<u>Cost per sq. ft.</u>
Small hospitals	\$36 to \$40
Banks	\$24 to \$31
Commercial office buildings	\$21 to \$25
Secondary schools	\$16 to \$22

¹Prices and Price Indexes, Catalogue No. 62-002, Statistics Canada, Ottawa, January, 1972, p. 75.

²Brief submitted to the Committee on the Costs of Education by the Ontario Association of Architects, Toronto, 1972, (Mimeographed) p. 6.

Fleming¹ has documented changes in school buildings resulting from developments in the social and economic climate of the Province and subsequent innovations in program calling for new types of space and facilities. These developments have had an important impact on the size, type and design of school buildings and on the equipment provided in them.

The Technical and Vocational Training Assistance Act 1960

On November 25, 1960, the Honourable Michael Starr, Minister of Labour, introduced a resolution into the House of Commons which was later to result in The Technical and Vocational Training Assistance Act (TVTA). He made it clear that the program was being introduced for more than purely educational reasons when he said:

"It is designed to undergird the government's program to increase employment and foster national development"²

The implementation of the Federal-Provincial Agreement under the Act had a tremendous impact on the amount of accommodation in the shops of the secondary schools and in the development and expansion of comprehensive secondary schools. The Federal government provided capital grants of 75 per cent of the approved cost for technical-vocational facilities and the Department of Education paid the remaining 25 per cent. There was, therefore, no part of the approved cost paid by local taxation on property. An important outcome of the additional support was that a considerable number of small schools with low enrolments were phased out because of the necessity to have an enrolment great enough to justify the wider spectrum of courses.

During the term of the Agreement, school boards in Ontario took advantage of the financing arrangements to expand their accommodation at a phenomenal rate. Up to the deadline of March 31, 1963, there were 513 applications for capital construction approved by the Federal government. Ontario's share was 259³.

¹Fleming, W. G., "School buildings, facilities, and equipment", Ontario's Educative Society, Volume III, University of Toronto Press, Toronto, 1972, pp. 396-422.

²Fluxgold, Howard, Federal Financial Support for Secondary Education and Its Effect on Ontario, 1900-1972, Ontario Teachers' Federation, Toronto, 1972, p.91.

³Fluxgold, Howard, op. cit., p. 96.

There was "no doubt that Ontario was the prime beneficiary of the Federal programs.....Its expenditure for capital projects was over half of the total expenditure for all of Canada up to March 31, 1966. It constructed more than half of all technical and vocational high schools for all of Canada and created more than half the total of new student places provided under the Act".¹

There is some evidence that the space requirements for some shops were excessive, resulting in greater capital outlays than necessary, other requirements were too rigid to meet adequately the great variety in the local circumstances in communities throughout the Province, and some boards secured more accommodation than realistic forecasting of need would have justified. To some extent these factors are now contributing to higher operation and maintenance costs than a more controlled building program, in terms of need, would have caused.

On the other hand, the expenditures on capital projects provided the accommodation required for an enrolment increasing at an unprecedented rate. It is questionable if the space could have been built on time if the grants had not been available. At the same time, the expansion of technical-vocational facilities increased the proportion of the young people who stayed in school to take programs in which they were interested but which were not formerly available. The existence of the additional accommodation can be an asset of considerable magnitude now, when funds are not so readily available, provided the facilities are taken into account fully in any assessment of need during the next few years.

It should be noted that, in the latter part of the 1960's, some boards which had not been able to participate in the earlier program under the Agreement were assisted by the Province. The Department of Education agreed to pay 75 per cent of the approved cost of technical-vocational facilities by cash contributions with the school board assuming the remaining 25 per cent. This program is almost completed so that the great majority of boards do not have a need for additional accommodation in the technical-vocational area.

¹Ibid., p. 97.

Financing by Issue of Debentures - Procedures

The several School Acts make provision for expenditures by school boards to provide sites and buildings considered necessary for the conduct of the educational program. When debentures are to be issued, the Ministry of Education determines the amount of the approved cost. In the cases of Public School boards and boards of education, the Ontario Municipal Board must decide on the financial ability of each board to undertake the expenditure. This requirement does not apply to Separate School boards.

Prior to 1969 a public school board or a board of education had to request the local municipal council to issue debentures to finance a capital expenditure by the board. While the liability was in the name of the municipal council, the responsibility for the annual payment of principal and interest was a charge against the ratepayers of the board concerned. In the case of a Separate School board, the debentures were issued in the name of the board with the annual payment of principal and interest a charge against the supporters of the board.

In the 1950's, many new secondary school boards were organized, each having responsibility for education in a number of municipalities and, in some cases, for a whole county or parts of several counties. When the secondary school board considered it necessary to provide additional accommodation for which debentures would be required, it requested the municipal council, or municipal councils where there were more than one, to approve the expenditure. Subject to the approval of the expenditure by the Ontario Municipal Board, the municipal council, or a majority of the councils where there were more than one, could approve the application. The council of the municipality within which the high school already existed or was to be located raised the required sum by the issue of debentures. Provision also existed in the legislation whereby the county council might issue the debenture instead of the municipal council.

Approval of the Ontario Municipal Board in terms of financial ability of each municipality to incur further capital indebtedness was also necessary. Many difficulties, problems and delays occurred. For example, it was conceivable that a secondary school board embracing fifteen municipalities might have fourteen of them able to incur additional capital indebtedness while one municipality was unable to do so. The result would be a delay in the provision of much needed school accommodation.

For many reasons it was considered that, with the creation of larger school jurisdictions each embracing more municipalities, it was necessary to facilitate the procedures for the financing of school accommodation. The result was that, in 1969, authority was given to public school boards and boards of education to issue debentures in their own names for capital purposes in the same manner as Separate School boards had been accustomed to doing. Paradoxically, the one exception to this general legislation is the Metropolitan Toronto School Board, which is the largest enrolment and the greatest assessment of any board in the Province. The Municipality of Metropolitan Toronto Act passed before the new general legislation provides as follows:

"218. (1) Subject to the limitations and restrictions in this Act and The Ontario Municipal Board Act, the Metropolitan Council may borrow money for the purposes of,

.....

(d) any board of education in the Metropolitan Area,

whether under this or any general or special Act, and may issue debentures therefor on the credit of the Metropolitan Corporation."¹

In the judgement of the Committee, the anomaly, whereby a school board having responsibility for one class of pupils in a one-room school can issue debentures to provide a new school or additional accommodation, whereas the board responsible for one-quarter to one-third of the pupils in the Province cannot do so, should be removed by an amendment to The Municipality of Metropolitan Toronto Act deleting section 1 (d) of Section 18 of the Act and making the general legislation applicable to the Metropolitan Toronto School Board.

Most of the debentures issued for school building purposes have been repayable in approximately equal annual or semi-annual payments over a period of twenty years although there are some exceptions in the number of years for which debentures have been issued.

For many years, debentures to finance school building projects were sold on the bond market by municipal and county councils and Separate School boards.

¹ The Municipality of Metropolitan Toronto Act, Revised Statutes of Ontario, 1970, Chapter 225, pp. 1392-1393.

The accumulating indebtedness of these bodies, the escalating interest rates at which debentures had to be sold, the extent of the demand in the money market, the scarcity of money available for these purposes, and the general economic climate were among the factors which combined to make it more and more difficult for councils and Separate School boards to market debentures on a reasonable basis.

To meet the problem the Province passed legislation¹ in 1966 establishing The Ontario Education Capital Aid Corporation. This body was authorized to purchase from municipalities debentures issued by them for school board undertakings. For purposes of the Act municipality means a metropolitan district or regional municipality, county, city, town, village, township, improvement district or school board. With the establishment of the larger units of school administration in 1969, debentures to finance school buildings have been issued by school boards and the Municipality of Metropolitan Toronto. Under the terms of the Act the Province is authorized to advance moneys to the Corporation to enable it to purchase debentures. There are obvious advantages to local authorities in terms of the availability of debenture funds and more favourable interest rates.

Capital Indebtedness 1961-1970

Table 14 (page 99) presents the total for the Province of payments made by school boards on capital indebtedness each year for the period 1961 to 1970 inclusive. During the decade the annual debenture payments by boards increased from \$56,082,000 to \$172,984,000 or by more than 200 per cent. The highest increase in any one year, approximately 28 per cent, occurred in 1964, while the average annual increase over the period was 13.3 per cent.

The cumulative total of the outstanding capital indebtedness in 1969 for school boards and the payments to be made annually to retire that indebtedness are shown in Table 15 (page 100). Additional debentures have already been issued or committed in 1971 and 1972 but, omitting consideration of these and if no additional debentures were issued, it can be seen that during the ten-year period from 1971-80 inclusive, the outstanding principal would be decreased

¹ The Ontario Educational Capital Aid Corporation Act, Revised Statutes of Ontario, 1970, Chapter 310, pp. 73-77.

TABLE 14

SCHOOL BOARD PAYMENTS FOR DEBT CHARGES, 1961-1970¹

Year	Elementary (\$000)	Secondary (\$000)	Total (\$000)	Per Cent Increase
1961	36,685	19,397	56,082	16.6
1962	39,561	20,885	60,446	7.8
1963	44,139	23,433	67,572	11.8
1964	57,971	28,513	86,484	28.0
1965	63,715	29,457	93,172	7.7
1966	68,081	32,437	100,518	7.9
1967	77,793	40,277	118,070	17.5
1968	88,986	45,785	134,771	14.1
1969	102,026	50,533	152,559	13.2
1970	115,734 ²	57,250 ²	172,984 ²	10.2 ²

¹ Reports of the Minister of Education, 1961-1971

² Includes interest on short-term borrowings

TABLE 15

STATUS OF DEBENTURE RETIREMENT BY SCHOOL BOARDS,
1969-1991, FOR DEBENTURES ISSUED PRIOR TO 1971¹

Year	Principal Outstanding Elementary (\$000)	Principal Outstanding Secondary (\$000)	Principal Outstanding Total (\$000)	Payments ² Elementary (\$000)	Payments ² Secondary (\$000)	Payments ² Total (\$000)
1969	814,756	403,616	1,218,372	102,026	50,533	152,559
1970	899,978	419,059	1,319,037	115,734	57,250	172,984 ³
1971	893,983	438,335	1,332,318	119,220	57,797	177,017
1972	824,022	411,738	1,235,760	118,193	57,701	175,894
1973	785,742	384,548	1,170,290	118,394	56,529	174,923
1974	727,734	355,433	1,083,167	112,070	55,034	167,104
1975	676,806	328,566	1,005,372	98,465	53,778	152,243
1976	588,657	296,383	885,040	106,050	52,325	158,375
1977	565,765	273,791	839,556	102,458	49,847	152,305
1978	510,291	245,822	756,113	97,857	47,394	145,251
1979	456,733	218,702	675,435	92,015	46,292	138,307
1980	400,084	192,486	592,570	85,985	42,853	128,838
1981	350,267	170,212	520,479	81,099	39,478	120,577
1982	299,523	142,686	442,209	76,575	37,350	113,925
1983	241,558	119,894	361,452	72,464	34,120	106,584
1984	199,566	95,692	295,258	67,697	32,951	100,648
1985	158,042	72,328	230,370	60,868	30,368	91,236
1986	104,946	48,616	153,562	55,971	27,925	83,954
1987	66,423	30,920	97,343	47,655	20,520	68,175
1988	34,051	15,265	49,316	36,675	16,322	52,997
1989	12,324	6,439	18,763	23,790	11,552	35,342
1990	3,587	1,835	5,422	9,613	4,896	14,509
1991	-	62	62	3,374	1,865	5,239

¹Ministry of Education, Ontario, 1972.

²Payment includes principal and interest.

³Includes interest on short-term borrowings.

TABLE 16

DECREASE IN DEBENTURE PRINCIPAL, 1970-1991,
FOR DEBENTURES ISSUED PRIOR TO 1971¹

Year	Decrease in Principal Elementary (\$000)	Decrease in Principal Secondary (\$000)	Decrease in Principal Total (\$000)
1970	(\$85,222)	(\$15,443)	(\$100,665) ²
1971	5,995	(19,276)	(13,281)
1972	69,961	26,597	96,558
1973	38,280	27,190	65,470
1974	58,008	29,115	87,123
1975	50,928	26,867	77,795
1976	88,149	32,183	120,332
1977	22,892	22,592	45,484
1978	55,474	27,969	83,443
1979	53,558	27,120	80,678
1980	56,649	26,216	82,865
1981	49,817	22,274	72,091
1982	50,744	27,526	78,270
1983	57,965	22,792	80,757
1984	41,992	24,202	66,194
1985	41,524	23,364	64,888
1986	53,096	23,712	76,808
1987	38,523	17,696	56,219
1988	32,372	15,655	48,027
1989	21,727	8,826	30,553
1990	8,737	4,604	13,341
1991	-	1,773	5,360

¹ Ministry of Education, Ontario, 1972.

² Increases shown in parentheses

from \$1,332,318,000 to \$592,570,000, an average decrease of approximately \$74 million per year. The actual decrease per year is shown in Table 16 (page 101).

Since The Ontario Education Capital Aid Corporation was established in 1966, it has had allocated to it a total of approximately \$1,275,087,000. The data are presented in Table 17 (page 103). For the fiscal years 1969-70, 1970-71, and 1971-72, approximately \$200 million per year was provided to the Corporation to enable it to purchase debentures for school purposes. For the fiscal year 1972-73, the allocation is \$159 million.

Several factors influence the amount of the expenditure necessary to build essential accommodation in the future. The evidence we have gathered about the number of pupil places provided in new schools and additions since 1946, the enrolment projections to 1981, and the present and projected rates of utilization of existing space indicate that the need is limited. It is recognized, however, that some obsolete and worn-out accommodation will be abandoned, that some other space will have to be renovated or rehabilitated, and that some new places will have to be provided for reasons already cited. When all of these considerations are taken into account, it is the view of the Committee that the amount of money allocated for school buildings in the period from 1973 to 1981 can be reduced substantially by the sum of \$109,000,000, from the allocation of \$159,000,000 in 1972-73. We consider that the amount of \$50,000,000 per year in 1972 constant dollars is adequate to meet essential needs of school boards for basic accommodation to 1981. It should be clearly established as policy and school boards should be made fully aware that the limit of \$50,000,000 cannot be exceeded in any one year. The funds that are designated by the Province for The Ontario Education Capital Aid Corporation should be allocated by the Ministry of Education on the basis of demonstrated need and priorities as documented by the submissions of school boards and after a thorough and searching analysis of their forecasts.

Legislative Grants

(1) When the Ministry of Education, on the basis of the formulae in the Capital Grant Plan 1971, arrives at a calculated cost which is approved for a building project, it pays grants on the same percentage of the annual payment of principal and interest on the debentures as the approved cost is to the total

TABLE 17

THE ONTARIO EDUCATION CAPITAL AID CORPORATION
LOANS AND ADVANCES, REPAYMENT OF LOANS AND ADVANCES,
INCREASE IN GROSS DEBT, CUMULATIVE GROSS DEBT
FISCAL YEARS 1966-67 TO 1972-73

<u>Fiscal Year</u> ¹	<u>Loans and Advances (\$000)</u>	<u>Repayment of Loans and Advances (\$000)</u>	<u>Increase in Gross Debt (\$000)</u>	<u>Cumulative Gross Debt (\$000)</u>
1966-67	\$166,185	N/A	\$166,185	\$ 166,185
1967-68	167,555	\$ 6,931	160,624	326,809
1968-69	180,285	14,316	165,969	492,778
1969-70	200,550	20,980	179,569	672,347
1970-71	201,512	28,687	172,826	845,173
1971-72	200,000 (Interim)	33,600 (Interim)	166,400 (Interim)	1,011,573 (Interim)
1972-73	159,000 (Estimated)	36,300 (Estimated)	122,700 (Estimated)	1,134,273 (Estimated)

¹ Fiscal year is April 1 to March 31

cost of the project. The formulae are so designed that normally it is anticipated that approximately 90 per cent of the actual cost of the building will be approved for grant purposes. The result of this policy is that the Province pays grant on only nine-tenths of the annual payment of principal and interest on the debentures with the local taxpayers required to pay the total amount of the remaining one-tenth. The Province's grant on the nine-tenths is at the rate of 75 per cent or 90 per cent for a board of average wealth as determined by its equalized assessment. The local taxpayers must pay the remaining percentage not covered by the legislative grant. Therefore, the local taxpayer must pay a part of the amount approved for grant purposes plus all of the amount unapproved. An example may help to illustrate the procedure.

Suppose that a board decides to provide a new building for which the actual cost is \$1,000,000, with debentures issued for that amount to be repaid over a period of twenty years. The Ministry of Education gives an approval for grant purposes in the amount of \$900,000. If we assume that the annual payment of principal and interest is \$110,000, and that legislative grant is paid on nine-tenths of this sum, the amount eligible for grant is \$99,000. The other one-tenth, or \$11,000, must be raised wholly by the local taxpayers. On the amount of \$99,000 eligible for legislative grant, let us assume the rate of grant is 90 per cent. Therefore, the actual grant is \$89,100. The other one-tenth or \$9,900 must also be raised locally. Consequently, the sums of \$11,000 and \$9,900, or a total of \$20,900, must be raised from local taxation with \$89,100 paid by legislative grant, for the total annual payment of \$110,000.

This policy has a number of implications. On the one hand, the principle that the poorer the board on the basis of equalized assessment the higher its rate of grant is recognized on nine-tenths of the annual payment. On the other hand, the one-tenth is borne by the local taxpayers regardless of wealth of the board, thereby denying the principle recognized for nine-tenths of the annual payment. The result is an unequal burden on taxpayers in a low assessment area in comparison with those in a high assessment area for the same capital expenditure.

Many briefs presented to the Committee have emphasized the inequity imposed by the "unapproved" portion of expenditures by boards for capital building projects. It is our view that under the formula based on an allowance of a number of square feet per pupil and a realistic expenditure per square foot, as we have already recommended, the actual approved cost of a capital projects providing essential

school accommodation should be approved for grant purposes.

(2) A number of school boards consider that the accommodation to be provided for essential educational programs ought to exceed the standards which can be met within the cost limitations approved by the Ministry of Education and applicable to other boards in the Province. Under present practice, expenditures to provide excess areas or other more elaborate accommodation may be approved for grant purposes in part or may not be approved for grant purposes at all. In the first case, the board receives approval of an expenditure above what poorer boards can receive. In either case an additional burden is imposed on the local taxpayers because they must bear a part or 100 per cent of the cost of the excess expenditure respectively. It is the view of the Committee that this procedure should be discontinued and that when the new formula is developed based on area per student and expenditure per square foot, all boards be required to provide accommodation at a cost not exceeding the calculated expenditure limits.

(3) In a considerable number of capital building projects, approval is given for expenditures for facilities in addition to those required for the basic essential school program. Among these items are swimming pools, auditoria, and community recreation centres. Expenditures for these facilities are not approved for grant purposes so that the total payment of debt charges for them have to be met by the school board's ratepayers as an educational cost.

Under the provision of Section 34, paragraph 44, of The Schools Administration Act a board may enter into an agreement with the council of a municipality for the joint use of educational and municipal facilities. It is the view of the Committee that a school board ought to continue to be permitted to make expenditures for swimming pools, auditoria, community recreation centres, and the like in their schools provided the total cost of these additional facilities is not a charge against the local taxpayers for educational purposes and that the finances for these purposes are provided to the board from other sources, in most cases the municipal council. In other words, the school board should not assume the cost of facilities not essential to its educational programs. This is not to say that the Committee does not accept the desirability of providing these facilities in a community. It does believe, however, that the cost for them ought to be borne by the municipal authority and that the cost ought to be attributable to that authority.

In addition, where a board has jurisdiction for educational purposes in a number of municipalities, as is now the case in Ontario, it is unfair for the board to pay the cost of a swimming pool, for example, in one community within a board's jurisdiction and charge that cost to all the school taxpayers in the total geographic area served by the board. In most cases, the swimming pool may be so remote from most school taxpayers that it can be used only by those within the municipality or adjoining area.

Where the municipal authority does provide the capital necessary to build a swimming pool or other facility within a school building and where, as a result, the school benefits from the use of the facility, the school board should assume a reasonable share of the cost of operation of the facility in relation to the board's degree of utilization of the facility for its educational program.

(4) For some considerable time, accumulated capital indebtedness has been creating financial problems for many school boards and their ratepayers or supporters. For example, a few years ago, one municipality, in which there had been a great deal of residential housing development and little industrial growth, had accumulated such a large capital debt for schools that it was unable to finance sewers, water mains, and other local improvements. Consequently, there was little prospect that industrial development would take place within the municipality to help meet the problem because the tax rate was already high and the necessary municipal services were unavailable. Some relief occurred when the county school organization was implemented. In addition, the Ministry of Education has been increasing the percentage of its grants on the portion of the annual payments on debt charges approved for grant purposes. This rate has now reached as high as 95 per cent for a board of average wealth as measured by its equalized assessment per pupil.

Most of the debentures on which annual payment is now being made were sold to schools at a time when local Planning Boards and municipal councils could determine the nature and extent of the development which might take place in their jurisdictions. There was, therefore, considerable justification for assessing a part of the cost of school facilities to the local school board. But circumstances have changed dramatically in the last few years. The need for overall planning on a broader basis has resulted, for example, in the concept of the Toronto-Centred Region and the North Pickering Community Development Project in connection with the proposed Pickering Airport. It seems clear that this pattern

may well be extended as the Province assumes greater responsibility in the planning area. Consequently, the decisions about the nature and extent of development at the local level would seem to lie less and less with local authorities and more and more, at least in broad outline, at the Provincial level. The justification, therefore, for charging any part of the cost of new school accommodation to the local taxpayers does not exist to the extent that was formerly the case. It is the view of the Committee that new financing procedures are required to meet the situation.

The Ministry of Education is now paying a substantial part of the annual payments on the approved portion of debt charges for accommodation already provided. It is the view of the Committee that existing commitments ought to continue to be financed in the present manner. It is recommended, however, that the Ministry of Education assume financial responsibility for 100 per cent of the annual payments on principal and interest on the approved cost of any building project for which building proposal approval is given after January 1, 1974. Consequently, the Ministry would make its first payments at the rate of 100 per cent in 1975 for debentures issued by school boards in 1974.

(5) It may be argued that when 100 per cent of the cost of school accommodation is paid by the Ministry of Education there will be a diminution or loss of local autonomy in so far as capital building programs are concerned. But building plans and expenditures for capital construction have traditionally been subject to approval of the Ministry of Education for grant purposes and particularly during the last twenty-five years. The issue of debentures by Public School boards, boards of education and municipal councils have been subject to approval by the Ontario Municipal Board in terms of the ability of the issuing body to assume the financial obligation involved. As a result of the Ministry's assumption of 100 per cent of the cost to provide school accommodation, it should no longer be necessary for the Ontario Municipal Board to withhold approval of a needed expenditure because one municipality in the jurisdiction has reached the limit of its ability to assume capital indebtedness.

It is true that a school board's ability to provide more elaborate accommodation for the essential educational program than acceptable standards can justify will be eliminated. In the view of the Committee, that authority ought to be eliminated whether the Province pays 100 per cent of the cost or not. That policy has been responsible for a disproportionate amount of the funds allocated to The

Ontario Education Capital Aid Corporation being used by a few boards able to make expenditures in excess of the amount approved for grant purposes. It has also resulted in the imposition of taxes at the local level to pay for 100 per cent of the "unapproved" portion of the capital expenditure. It is the view of the Committee that both these possibilities should be eliminated. The real control in the future will be based on the case a board can make to the Ministry of Education for additional accommodation. This requirement has been inherent in the existing procedures but we have recommended that it be implemented on a more sophisticated and detailed basis. Once the need for more accommodation has been accepted, the board should continue to exercise the same authority and controls as in the past.

(6) The purchase of school sites has been financed in a variety of ways over the years. None of the methods used has proven satisfactory mainly because it is difficult or impossible to establish criteria at the Provincial level which can be applied to all boards on an equitable basis. For a number of years, the then Department of Education approved for grant purposes at the board's ordinary rate of grant the actual expenditure by the board for a school site. Several problems arose as a result of this procedure, one of which was the tendency for a board to pay an excessive purchase price, particularly where the board's rate of grant was high. At the present time, the amount of the expenditure by a board which is approved for grant purposes is the lesser of the actual cost or the amount calculated on the basis of the equalized assessment of the property two years previously. The latter figure is usually established before development takes place. In nearly all cases, therefore, the equalized assessment is the amount on which grant is paid whereas the actual cost is much greater. Consequently, a relatively small proportion of the purchase price is normally eligible for grant.

Because of our previous recommendation that the Ministry pay 100 per cent of the cost of approved school accommodation, effective January 1, 1974, and since this policy will relieve local boards of substantial costs in the future, we believe that local boards should assume the remaining relatively small proportion of the cost of sites which they are not now paying, effective January 1, 1973. If this is done, it will ensure a maximum effort by the school board to secure sites at the most favourable price, it will leave with the board the authority to determine where accommodation will be provided, and it should assist in the attainment of a higher degree of co-operation among Planning Boards, municipal

councils, and school boards in the provision of school sites.

It is believed that the cost of sites which are defined as permanent improvements can be paid from current funds within the expenditure limit for this purpose established by the school Acts but adjusted to the extent we have set out in Recommendation 21 of this Report.

Permanent Improvements Financed from Current Funds

Under existing legislation school boards are empowered to make expenditures from current funds for permanent improvements as defined in paragraph 18 of subsection (2) of Section 1 of The Schools Administration Act, provided that the total expenditure for these purposes, together with any sum allocated to a reserve fund, does not exceed an amount calculated at one mill in the dollar upon the total of the applicable equalized assessments. The provisions of the legislation are illustrated by the following reference to The Secondary Schools and Boards of Education Act as amended by The Secondary Schools and Boards of Education Amendment Act, 1972:

Section 31, subsection (1), clause (2)

"31. - (1) Every divisional board in each year shall prepare and adopt estimates of all sums required during the year for public school purposes and for secondary school purposes respectively, and such estimates,

.....

(d) may provide for expenditures for permanent improvements and for an allocation to a reserve fund, provided that the total of expenditures for permanent improvements referred to in subparagraphs 1, ii, iii and vii of paragraph 18 of subsection 2 of section 1 of The School Administration Act, together with any sum allocated to a reserve fund,

(1) for secondary school purposes, shall not exceed an amount calculated at one mill in the dollar upon the total of the equalized assessments of the municipalities and locations in the school division, and

- (11) for public school purposes, shall not exceed an amount calculated at one mill in the dollar upon the total of the equalized assessments of the property rateable for public school purposes in the municipalities and locations in the school division."

"31. - (1a) In subsection 1, "equalized assessment" for a municipality or a locality means the assessment upon which taxes are levied in the municipality or locality, as the case may be, in the year preceding the year for which the estimates are adopted as adjusted by the assessment equalization factor applicable thereto that is provided by the Minister."

Similar legislation exists in The Public Schools Act, Section 51, subsection (1), clause (b), subclause (iv), as amended by Section 14 of The Public Schools Amendment Act, 1972, and in The Separate Schools Act, Section 65, as amended by Section 21 of The Separate Schools Amendment Act, 1972.

The relevant reference to The Schools Administration Act reads as follows:

Section 1, subsection (2), paragraph 18

"1. - (2)

18. "permanent improvement" includes,

1. the acquisition of a school site and an addition or an improvement to a school site,
11. the acquisition or erection of building used for instructional purposes and any addition, alteration or improvement thereto,
111. the acquisition or erection of an administration office, a residence for teachers or caretakers and a storage building for equipment and supplies, and any addition, alteration or improvement thereto,
-
- vii. initial payments or contributions for past service pensions to a pension plan for officers and other employees of the board."

There is one exception to the limits set out in the legislation referred to above. Under The Municipality of Metropolitan Toronto Act¹ it is stated:

"127. It is the duty of the School Board and it has power,

.....

- (g) to prepare, adopt and submit each year to the Metropolitan Council, on or before such date and in such form as the Metropolitan Council may prescribe, the estimates of the School Board for the current year, separately for public elementary and for secondary school purposes, of all sums required to meet its expenditures and obligations under this Act, and such estimates,

.....

- (v) may provide for expenditures to be made out of current funds for permanent improvements, such expenditures not to exceed a sum calculated at two mills in the dollar upon the total assessment in the Metropolitan Area for secondary school purposes and two mills in the dollar upon the total assessment in the Metropolitan Area for public school purposes according to the last revised assessment rolls."

It should be noted that this provision differs from the General legislation in that it allows two mills instead of one mill and that the two mills are calculated on local assessment whereas the one mill is on equalized assessment.

In assessment taken in 1969 for 1970², the local assessment at the public school level for the Metropolitan School Board was approximately \$5.07 billion. An expenditure equivalent to two mills would, therefore, be \$10.14 million. The local assessment at the secondary school level was approximately \$5.55 billion so that an expenditure equivalent to two mills was \$11.1 million. The total

¹The Municipality of Metropolitan Toronto Act, Revised Statutes of Ontario, 1970, Chapter 295, pp. 1340-1342.

²1970 Summary of Financial Reports of Municipalities, Volume 1, Department of Municipal Affairs: Ontario, Toronto, 1972, p. XXVI.

for the two levels would, therefore, be \$21.24 million. This means that the Metropolitan School Board could commit \$21.24 million annually for permanent improvements. The School Board has not made expenditures of anything like this magnitude but it has the authority under present legislation to do so if it should choose to make that decision. Any expenditures which might qualify for legislative grant would, of course, be subject to approval of the Ministry of Education for that purpose.

It is conceivable that, if projects are approved to the total maximum of \$10.14 millions at the public school level, and if the applicable rate of grant is 70 per cent, then the Ministry of Education would have to pay grants amounting to \$7.1 millions in one year. The possibilities that the justification of need, planning, approval, etc., would come together in any one year to allow such an occurrence are unlikely, even though permitted.

However, with the assumption of 100 per cent of capital building costs by the Province for the acquisition or erection of a building used for instructional purposes and any addition, alteration or improvement thereto, there is no longer any need for expenditure of the magnitude represented by the equivalent of the mill rates contained in the legislation. Consequently, the Committee believes that The Secondary Schools and Boards of Education Act, The Separate Schools Act, and The Public Schools Act ought to be amended to permit an expenditure by a board for permanent improvements of not more than the equivalent of one-half mill on equalized assessment at each of the elementary and secondary levels. It is also our view that The Municipality of Metropolitan Toronto Act ought to be amended to permit an expenditure for similar purposes of not more than one-half mill on local assessment for each of the two levels.

APPENDIX A¹

PUPIL LOADINGS FOR LEGISLATIVE GRANT PURPOSES

1. The following pupil loadings shall be used in all Requests for Approval for general legislative grant purposes, unless otherwise determined.

SPACE	PUPIL LOADINGS	NOTES
<i>Elementary</i>		
Classroom (regular) or the equivalent teaching space	35	
Special Education classroom	varies	See regulations for Special Education Services
Kindergarten (single)	40	Organized as 2 classes, 20 pupils in the morning and 20 pupils in the afternoon.
Group Instruction	Proportionate to size	
Seminar (in connection with group instruction room)	Proportionate to size	
Art Room	35	
Music Room—Vocal or Instrumental	35	
Science Room/Science Laboratory	35	
Commercial Room	35	
Home Economics Room	(	
Industrial Arts Room	(35 (for two)	
Library Resource Centre	NIL	An existing library-classroom shall have a pupil loading of 35
General Purpose Room (Grades 7-10 pupil places only)		
Single	NIL	
Each additional single facility	35	
<i>Secondary (excluding special vocational schools)</i>		
Classroom (regular) or the equivalent teaching space	30	
Lecture Room	Proportionate to size	
Seminar Room (in connection with Lecture room)	Proportionate to size	

¹ Reproduced from Capital Grant Plan 1971, Ontario Department of Education, Toronto, 1971, pp.803 and 804.

SPACE	PUPIL LOADINGS	NOTES
Science, physics, biology and chemistry laboratories	30	
Art Room	30	
Music Room (Vocal or Instrumental)	30	
Typewriting Room	30	
Industrial Arts Room	30	
Home Economics Room (foods and nutrition, clothing and textiles or combined)	20	
Vocational Shop	20	
Vocational, industrial physics or chemistry labora- tories, agricultural science laboratory	20	
Vocational, green house	NIL	
Special Vocational Shops and classrooms	Proportionate to size	
Library Resource Centre	NIL	
Gymnasium (single)	NIL	
Each additional single facility	30	
Auditorium	NIL	An auditorium readily divisible into acceptable lecture rooms or similar may be given a commen- surate pupil loading and each lecture room or similar may thereby be treated as an eligible space for legislative grant purposes.

- 2 The Pupil loading of any spaces not listed in the foregoing shall be determined by the Department.

APPENDIX B

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE

Elementary

Regions 1 to 10

September 30, 1970

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS

September 30, 1970

REGION 1

ELEMENTARY

<u>Board No.</u> ¹	<u>Required</u> ² <u>Classrooms</u>	<u>Available</u> ³ <u>Classrooms</u>	<u>Percentage</u> <u>Utilization</u> ⁴ <u>of Classrooms</u>	<u>Available</u> <u>Portables</u>	<u>Percentage</u> <u>Utilization of</u> <u>Classrooms and</u> <u>Portables Combined</u>
137	3	6	50		50
8	127	123	103	4	100
16	99	97	102	2	100
144	1	-	-		-
29	100	101	99	1	98
59	45	42	107		107
161	1	1	100		100
163	2	3	67		67
164	1	1	100		100
1	39	42	93		93
153	1	1	100		100
128	1	1	100		100
129	6	6	100		100
131	3	2	150		150
136	4	4	100		100
139	1	2	50		50
18	24	25	96		96
145	2	2	100		100
146	2	2	100		100
147	3	4	75		75
33	48	57	84		84
32	510	575	89	5	88
156	4	5	80		80
45	26	33	79	1	76
160	2	2	100		100
162	2	3	67		67
82	18	20	90		90
95	40	43	93		93
175	5	7	71		71
167	13	4	-		-
86	25	32	78		78
88	33	24	138	3	122
98	220	196	112	2	111
171	13	13	100		100
173	1	2	50		50
105	19	20	95		95
115	20	18	111		111

- Notes: 1. For identification purposes, a number has been assigned to each school board in the study.
2. Estimated number of classrooms needed to meet board requirements on September 30, 1970.
3. Data taken from Department of Education Statistical Unit Records based on ELEMENTARY SCHOOL PRINCIPAL'S STATISTICAL REPORT, September, 1970
4. Calculation is made as follows:

$$\frac{\text{Required Classrooms}}{\text{Available Classrooms}} \times 100 = \text{Percentage Utilization of Classrooms}$$

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS
September 30, 1970

<u>REGION 2</u>					
<u>ELEMENTARY</u>					
<u>Board No.</u> ¹	<u>Required</u> ² <u>Classrooms</u>	<u>Available</u> ³ <u>Classrooms</u>	<u>Percentage</u> <u>Utilization</u> ⁴ <u>of Classrooms</u>	<u>Available</u> <u>Portables</u>	<u>Percentage</u> <u>Utilization of</u> <u>Classrooms and</u> <u>Portables Combined</u>
5	58	57	102	-	102
138	2	2	100	-	100
141	1	1	100	-	100
26	13	10	130	-	130
41	25	23	109	1	104
48	69	83	83	1	82
61	322	397	81	14	78
158	1	1	100	-	100
165	2	-	-	1	200
40	48	48	100	-	100
130	1	1	100	-	100
184	6	7	86	-	86
6	16	17	94	-	94
13	47	48	98	-	98
140	2	2	100	-	100
149	1	1	100	-	100
152	2	2	100	-	100
157	2	1	200	-	200
65	528	604	87	2	87
103	27	25	108	-	108
107	142	149	95	2	94
114	270	270	100	7	98
177	5	6	83	-	83
178	5	5	100	-	100
168	16	20	80	-	80
174	6	6	100	-	100
118	833	870	96	35	92
176	4	4	100	-	100
169	5	3	167	-	167

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS

September 30, 1970

<u>ELEMENTARY</u> Board No. ¹	<u>REGION 3</u>				Percentage Utilization of Classrooms and Portables Combined
	<u>Required Classrooms</u> ²	<u>Available Classrooms</u> ³	<u>Percentage Utilization of Classrooms</u> ⁴	<u>Available Portables</u>	
132	2	1	200	-	200
195	4	9	44	-	44
135	3	2	150	-	150
7	67	75	89	-	89
143	1	1	100	-	100
25	13	14	93	-	93
28	32	35	91	-	91
150	1	1	100	-	100
194	16	18	89	4	73
154	6	8	75	-	75
203	4	8	50	-	50
67	117	122	96	2	94
43	173	179	97	7	93
73	103	110	94	3	91
127	2	3	67	-	67
198	11	14	79	-	79
10	107	119	90	4	87
155	2	2	100	-	100
46	228	236	97	8	93
66	120	119	101	10	93
31	79	80	99	-	99
192	1	1	100	-	100
81	85	105	81	3	79
92	62	69	90	-	90
94	141	163	87	2	86
172	6	7	86	-	86
120	180	196	92	-	92
106	353	378	93	23	88
170	1	1	100	-	100
97	72	86	84	-	84
119	83	93	89	2	87

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS

September 30, 1970

REGION 4

ELEMENTARY

<u>Board No. 1</u>	<u>Required Classrooms 2</u>	<u>Available Classrooms 3</u>	<u>Percentage Utilization of Classrooms 4</u>	<u>Available Portables</u>	<u>Percentage Utilization of Classrooms and Portables Combined</u>
12	330	337	98	26	91
14	376	378	99	31	92
74	618	691	89	1	89
183	7	12	58	-	58
27	294	288	102	4	101
30	463	442	105	21	100
34	576	623	92	32	88
39	1025	1137	90	71	85
42	313	304	103	5	101
84	60	66	91	-	91
85	325	328	99	10	96
125	659	684	96	7	95
93	110	111	99	7	93
96	195	211	92	1	92
99	177	187	95	8	91
104	362	378	96	22	91

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS
September 30, 1970

<u>ELEMENTARY</u>		<u>REGION 5</u>			
<u>Board No. ¹</u>	<u>Required ² Classrooms</u>	<u>Available ³ Classrooms</u>	<u>Percentage Utilization ⁴ of Classrooms</u>	<u>Available Portables</u>	<u>Percentage Utilization of Classrooms and Portables Combined</u>
2	436	448	97	8	96
3	238	211	113	22	102
19	367	377	97	22	92
53	439	429	102	20	98
55	334	339	99	8	96
70	1040	1026	101	43	97
71	508	495	103	32	96
78	117	129	91	-	91
79	93	100	93	4	89
110	67	78	86	4	82
121	524	516	102	9	100
125	171	166	103	5	100

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS
September 30, 1970

REGION 6

<u>ELEMENTARY</u>					
<u>Board No. ¹</u>	<u>Required ²</u> <u>Classrooms</u>	<u>Available ³</u> <u>Classrooms</u>	<u>Percentage</u> <u>Utilization ⁴</u> <u>of Classrooms</u>	<u>Available</u> <u>Portables</u>	<u>Percentage</u> <u>Utilization of</u> <u>Classrooms and</u> <u>Portables Combined</u>
20	187	176	106	10	101
38	752	812	93	28	90
44	833	907	92	13	91
47	270	259	104	12	100
23	1140	1244	92	51	88
72	529	569	93	6	92
89	94	99	95	-	95
101	283	304	93	10	90
122	423	477	89	10	87
124	772	804	96	29	93

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS

September 30, 1970

REGION 7

ELEMENTARY

<u>Board No.</u> ¹	<u>Required</u> ² <u>Classrooms</u>	<u>Available</u> ³ <u>Classrooms</u>	<u>Percentage</u> <u>Utilization</u> ⁴ <u>of Classrooms</u>	<u>Available</u> <u>Portables</u>	<u>Percentage</u> <u>Utilization of</u> <u>Classrooms and</u> <u>Portables Combined</u>
9	131	118	111	6	106
22	1075	1101	98	33	95
54	1562	1627	96	44	94
181	59	76	78	-	78
180	6	6	100	-	100
63	874	836	105	47	99
15	1318	1310	101	79	95
68	2455	2411	102	271	92
75	530	551	96	36	94
83	336	371	91	18	86
90	260	277	94	9	91
116	195	214	91	2	90
126	156	161	97	3	95
102	2488	2474	101	145	95

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS

September 30, 1970

REGION 8

ELEMENTARY

<u>Board No. ¹</u>	<u>Required Classrooms ²</u>	<u>Available Classrooms ³</u>	<u>Percentage Utilization of Classrooms ⁴</u>	<u>Available Portables</u>	<u>Percentage Utilization of Classrooms and Portables Combined</u>
21	58	61	95	3	91
51	1076	1051	102	86	95
69	183	168	109	13	101
76	978	984	99	56	94
11	313	351	89	24	84
50	2303	2423	95	157	89
62	1834	1734	106	183	96
108	293	328	89	6	88
111	208	234	89	21	78

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS

September 30, 1970

REGION 9

<u>ELEMENTARY</u>					
<u>Board No. 1</u>	<u>Required 2</u>	<u>Available 3</u>	<u>Percentage</u>	<u>Available</u>	<u>Percentage</u>
	<u>Classrooms</u>	<u>Classrooms</u>	<u>Utilization 4</u>	<u>Portables</u>	<u>Utilization of</u>
			<u>of Classrooms</u>		<u>Classrooms and</u>
					<u>Portables Combined</u>
185	40	45	89	-	89
17	448	503	89	30	84
211	38	41	93	-	93
24	501	494	101	24	97
36	393	391	101	28	94
37	178	160	111	34	92
49	564	538	105	37	98
56	398	415	96	13	93
58	125	143	87	9	82
91	136	116	117	10	108
87	140	153	92	6	88
100	113	120	94	1	93

BOARD UTILIZATION OF EFFECTIVE CLASSROOM SPACE IN ELEMENTARY SCHOOLS

September 30, 1970

REGION 10

ELEMENTARY

<u>Board No.</u> ¹	<u>Required</u> ² <u>Classrooms</u>	<u>Available</u> ³ <u>Classrooms</u>	<u>Percentage</u> <u>Utilization</u> ⁴ <u>of Classrooms</u>	<u>Available</u> <u>Portables</u>	<u>Percentage</u> <u>Utilization of</u> <u>Classrooms and</u> <u>Portables Combined</u>
35	196	200	98	8	94
57	31	28	111	3	100
205	32	43	74	-	74
212	40	37	108	8	89
4	681	749	91	52	85
51	854	1069	80	10	79
187	6	8	75	-	75
202	83	87	95	8	87
179	1	1	100	-	100
60	319	360	89	13	86
64	294	319	92	12	89
80	356	452	79	48	71
109	993	1098	90	34	88
112	283	344	82	10	80
113	254	307	83	4	82
117	382	426	90	20	86

APPENDIX C

PUBLICATIONS ISSUED BY SCHOOL PLANNING AND BUILDING RESEARCH SECTION, MINISTRY OF EDUCATION

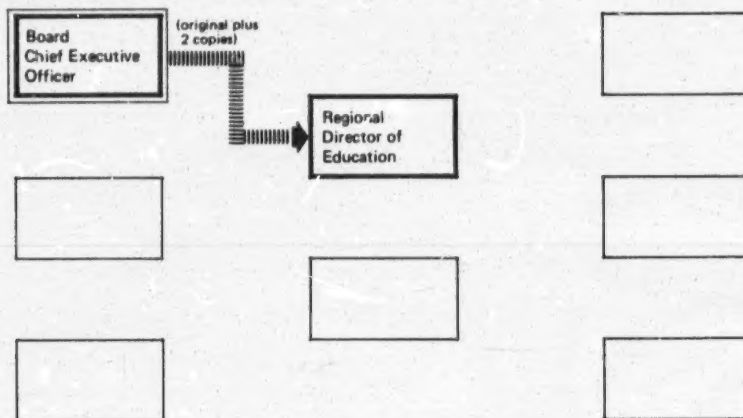
1. Physical Education Facilities for Secondary Schools (1965)
2. Guidance Centres for Secondary Schools (1965)
3. Library Materials Centres for Secondary Schools (1966)
4. Business and Commerce Facilities for Secondary Schools (1966)
5. Rehabilitation of Schools (1966)
6. Site - Principles of Site Development, Elementary Schools k-6 (1967)
7. School Design Forum (An Account of School Design Workshops) (1967)
8. Guidelines for Planning Colleges of Applied Arts and Technology (1967)
9. Home Economics (1968)
10. Library Resource Centres for Elementary Schools (1968)
11. Technical and Occupational Shops, Volume I (1968)
12. Science Laboratories for Secondary Schools (1968)
13. Report on Various Construction Contracts (1968)
14. Special Education Facilities for Emotionally Disturbed Children (1968)
15. Physical Education Facilities for Elementary Schools (1969)
16. Music Facilities (1969)
17. Technical and Occupational Shops, Volume II (1969)
18. Industrial Arts for Elementary and Secondary Schools (1969)
19. Colleges of Applied Arts and Technology, Master Planning (1969)
20. Colleges of Applied Arts and Technology Movement and Growth Patterns (1969)
21. Dorm 8 - An Experimental Social Study (Schools for the Blind and the Deaf) (1969)
22. An Experimental Student Housing Study (1969)
23. Schools and Playgrounds for Trainable Mentally Handicapped Children (1970)
24. Social Environments for a Regional Centre for Hearing Handicapped Children (1970).
25. Relocatable Learning Facilities (1970)
26. Schools for Intermediate Students (1971)
27. Thermal Environments in Schools (1971)
28. Dramatic Arts Facilities (1971)
29. Planning for Change - Colleges of Applied Arts and Technology (1971)
30. The College Resource Centre - Colleges of Applied Arts and Technology (1971)
31. Open Space General Learning Facilities for Kindergarten, Primary and Junior Students (1971)
32. Air-Supported Structures (1972)
33. School Media Centres (1972)

BUILDING PROPOSAL -- ELEMENTARY & SECONDARY SCHOOLS

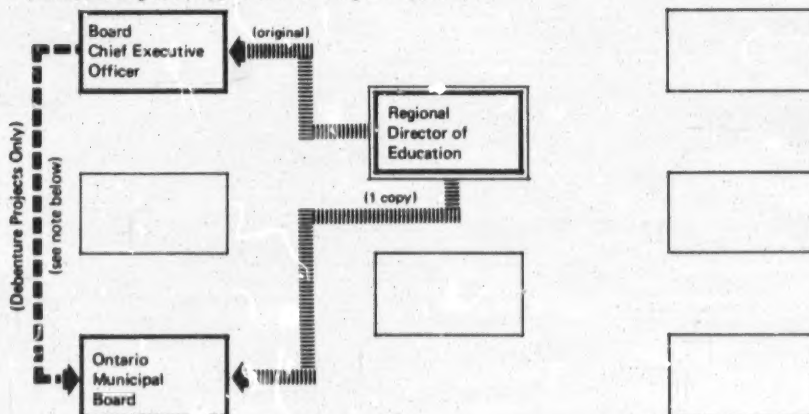
(New Schools, Additions & Alterations to Schools)

REQUEST FOR APPROVAL

(Forms Building 15 & 16, plus Form Building 17 if applicable)

**APPROVAL**

(Forms Building 18 & 16, plus Form Building 17 if applicable)



* Flow charts showing procedures within the Department of Education have not been shown.

NOTE:

Application by the board for Ontario Municipal Board initial approval is made AFTER receipt of the Department of Education's Approval. Application to Ontario Municipal Board at this stage will not be necessary if the project is covered by an Ontario Municipal Board approved capital quote or is to be financed from current funds.

¹ Reproduced from Capital Grant Plan 1971, Appendix 12,
Ontario Department of Education, Toronto, 1971, pp.923-926

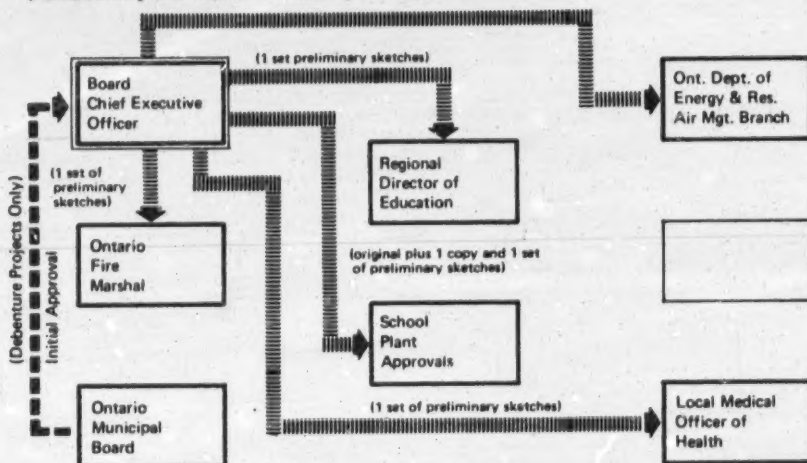
Flow Charts Illustrating Submission Procedures

PRELIMINARY SKETCHES – ELEMENTARY & SECONDARY SCHOOLS

(New Schools, Additions & Alterations to Schools)

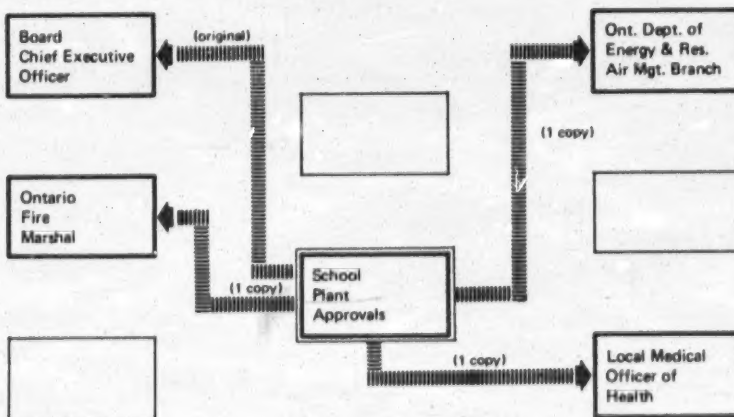
REQUEST FOR APPROVAL

(Forms Building 15 & 16 plus Form Building 17 if applicable)



APPROVAL

(Forms Building 18 & 16 plus Form Building 17 is applicable)



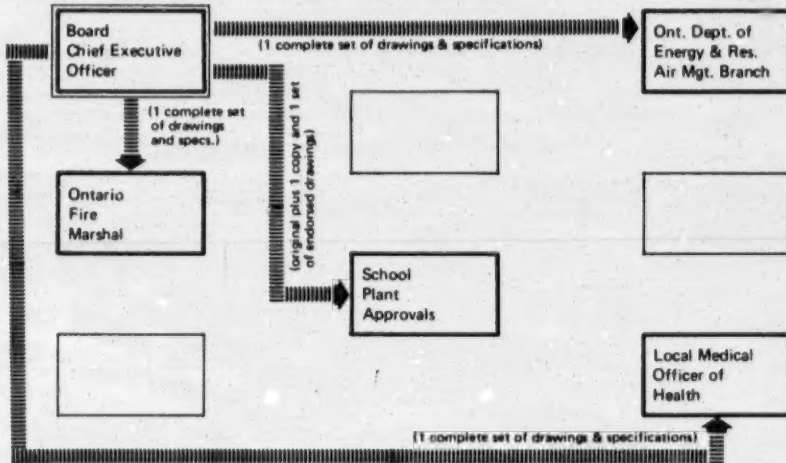
Flow Charts Illustrating Submission Procedures

WORKING DRAWINGS – ELEMENTARY & SECONDARY SCHOOLS

(New Schools, Additions & Alterations to Schools)

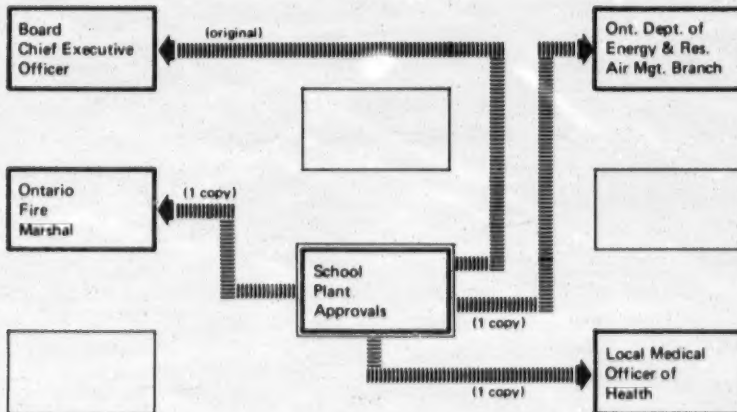
REQUEST FOR APPROVAL

(Forms Building 15 & 16 plus Form Building 17 if applicable)



APPROVAL

(Forms Building 18 & 16 plus Form Building 17 if applicable)

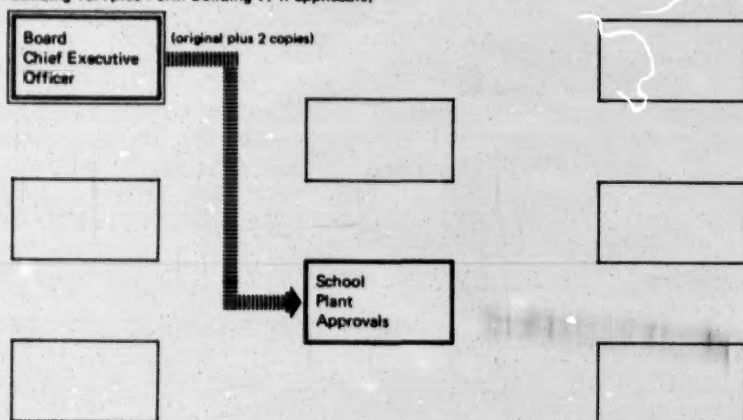


Flow Charts Illustrating Submission Procedures

FINAL APPROVAL – ELEMENTARY & SECONDARY SCHOOLS (New Schools, Additions & Alterations to Schools)

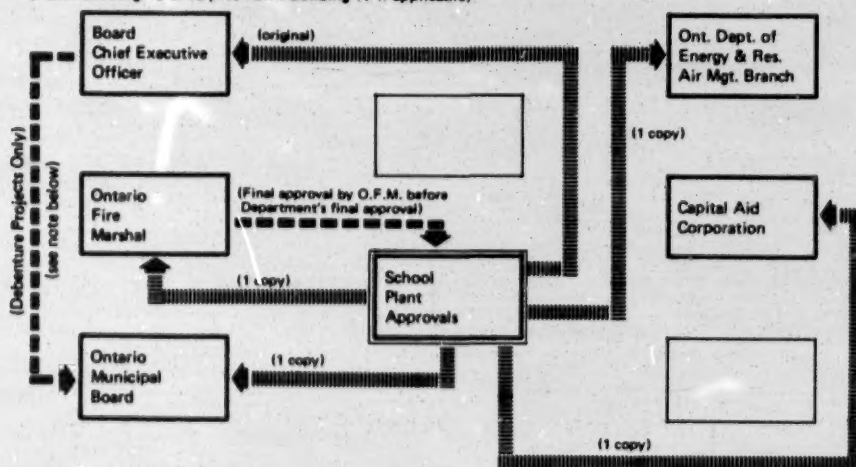
REQUEST FOR APPROVAL

(Form Building 15A plus Form Building 17 if applicable)



APPROVAL

(Form Building 18 & 16 plus Form Building 17 if applicable)



NOTE:

Application by the Board for Ontario Municipal Board Final Approval, and an offer to sell debentures to the Ontario Education Capital Aid Corporation is made after receipt of the Department of Education's Final Approval.

The Zones referred to in Appendix 4 Tables of Values shall be as follows:

ZONE 1

Brant
Bruce
Carleton
Dufferin
Dundas
Durham
Elgin
Essex
Frontenac
Glengarry
Grenville
Grey
Haldimand
Haliburton
Halton
Hastings
Huron
Kent
Lambton
Lanark
Leeds
Lennox & Addington
Lincoln
Middlesex
Muskoka
Nipissing (That part to the
south of and excluding the
Townships of East Ferris,
Bonfield, Calvin and Papineau)
Norfolk
Northumberland
Ontario
Oxford
Parry Sound
Peel
Perth
Peterborough
Prescott
Prince Edward
Renfrew
Russell
Simcoe

ZONE 1 Continued

Stormont
Victoria
Waterloo
Welland
Wellington
Wentworth
York

ZONE 2

Algoma
Cochrane
Manitoulin
Nipissing (other than that
in Zone 1)
Sudbury
Timiskaming

ZONE 3

Kenora
Rainy River
Thunder Bay

The location of the project shall
determine the Zone.

¹ Reproduced from Capital Grant Plan 1971, Ontario Department of
Education, Toronto, 1971, pp. 813, 823 and 824.

ACCOMMODATION UNIT VALUES (TABLE 1)
ELEMENTARY (1971)
 (including Senior Elementary)

ACCOMMODATION UNIT TOTAL	ZONES		
	1	2	3
	\$	\$	\$
800	246.00	262.00	267.00
for each further 10: Deduct	0.25	0.25	0.25
2,000	216.00	232.00	237.00
for each further 10: Deduct	0.15	0.15	0.15
3,000	201.00	217.00	222.00
for each further 10: Deduct	0.10	0.10	0.10
4,000	191.00	207.00	212.00
for each further 10: Deduct	0.05	0.05	0.05
5,000 and over	186.00	202.00	207.00

Note: Take the Accommodation Unit Total for the project to the nearest 10; 5 being taken to the next highest 10.

**ACCOMMODATION UNIT VALUES (TABLE 2)
SECONDARY (1971)**

ACCOMMODATION UNIT TOTAL	ZONES		
	1	2	3
	\$	\$	\$
8,000	158.00	170.00	174.00
for each further 50: Deduct	0.05	0.05	0.05
10,000	156.00	168.00	172.00
for each further 50: Deduct	0.05	0.05	0.05
12,000	154.00	166.00	170.00
for each further 50: Deduct	0.05	0.05	0.05
14,000	152.00	164.00	168.00
for each further 50: Deduct	0.05	0.05	0.05
16,000 and over	150.00	162.00	166.00

Note: Take the Accommodation Unit Total for the project to the nearest 50; 25 being taken to the next highest 50.

COMMITTEE ON THE COSTS OF EDUCATION

Staff Members

J. R. McCarthy

Executive Director

S. Baccalusi

Superintendent of Planning
and Development
York County Board of Education

F. A. Danna

Assistant Superintendent of
Business and Finance
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Ministry of Education

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Director of Education
Simcoe County Board of Education